DOCUMENT RESUME

ED 024 026 24 AL 001 564

By-Niyekawa, Agnes M.

A Study of Second Language Learning: The Influence of First Language on Perception, Cognition and Second Language Learning--a Test of the Whorfian Hypothesis. Final Report.

Hawaii Univ., Honolulu. Educational Research and Development Center.

Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.

Report No-P-3260

Bureau No-BR-5-0910

Pub Date Apr 68

Contract-OEC-6-10-308

Note-150p.

EDRS Price MF-$0.75 HC-$7.60

Descriptors-Bilingualism, *Cognitive Processes, Cultural Background, Cultural Differences, Culture Conflict, German, Interference (Language Learning), *Japanese, Japanese Americans, Language Role, *Perception, Psycholinguistics, Responsibility, Role Perception, *Second Language Learning, Self Concept, Sociolinguistics, Thought Processes, Translation, Verbs

Identifiers-*Whorfian Hypothesis

The use of the "traditional passive" form of the Japanese verb indicates to a native speaker that the subject of the verb was involuntarily subjected to something unpleasant. When combined with the causative form (passive causative), it is felt that the subject of the sentence was "caused to" take an action and is therefore not responsible for the act nor its outcome. These meanings must be expressed in English by adding whole clauses or phrases. It was hypothesized that the availability of these constructions in Japanese would cause native speakers to interpret interpersonal events by using these passive verb forms while speakers of English would not. In a translation study, the original and the translated versions of 20 Japanese and 21 English short stories were compared. It was found that the English-speaking translators tended to disregard the connotative meaning of the traditional passive while Japanese translators tended to read such meanings into the English original. A perception study was based on cartoons of interpersonal conflict situations to test whether Japanese subjects would tend to attribute responsibility for the negative outcome to others rather than themselves. In this test the overall difference between Japanese and Americans was significant at the .001 level in the predicted direction. In related tests, however, Americans who had studied Japanese used the traditional passive about as much as did native speakers. (JK)

Co-Operative Research
OE-6-10-308
NOV 20 1968
BR-50910
PA-24

ED 024026

EDUCATION RESEARCH AND DEVELOPMENT CENTER

COLLEGE OF EDUCATION
UNIVERSITY OF HAWAII
HONOLULU, HAWAII

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

A STUDY OF SECOND LANGUAGE LEARNING

Agnes M. Niyekawa

Final Report
Project No. 3260
Contract No. OE-6-10-308

U. S. Department of
Health, Education, and Welfare

Office of Education
Bureau of Research

April 1968

AL 001 564

FINAL REPORT
Project No. 3260
Contract No. OE-6-10-308

A STUDY OF SECOND LANGUAGE LEARNING

April 1968

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

Final Report

Project No. 3260
Contract No. OE-6-10-308

A Study of Second Language Learning

(The Influence of First Language on Perception, Cognition and Second Language Learning: A Test of the Whorfian Hypothesis)

Agnes M. Niyekawa

University of Hawaii

Honolulu, Hawaii

April 1968

The research reported herein was performed pursuant to a contract with the Office of Education, U. S. Department of Health, Education, and Welfare. Contractors undertaking such projects under Government sponsorship are encouraged to express freely their professional judgment in the conduct of the project. Points of view or opinions stated do not, therefore, necessarily represent official Office of Education position or policy.

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

ACKNOWLEDGMENT

This large scale study, conducted between November 1965 and December 1967, could not have been effectively carried out without the cooperation of a great many people. The writer is deeply indebted to all the project staff who so enthusiastically participated:

to David G. Ryans, co-principal investigator of the project, whose extensive research experience and administrative skills were invaluable in carrying us over the many hurdles we encountered and in keeping us on the right track. Without his expert coordination, the project could not have been completed.

to Danny D. Steinberg, research associate, who contributed a great deal to all aspects of the Perception Study, especially during the early planning stages when most of the crucial decisions on stimuli, variables, designs, etc. were made. As our computer expert, he handled most of the statistical analyses with great initiative and dependability.

to Peter F. Tanaka, research assistant, whose contribution far exceeded those expected from him. As a bright undergraduate student in psychology with exceptional insight into psychological and linguistic problems, he performed at a level equivalent to that of an advanced graduate student. A coordinate bilingual from Canada and Japan, Peter was indispensable to the Translation Study, but contributed a great deal to the Perception Study as well.

to Irwin Howard, who, with his MIT training in linguistics, clarified many of the theoretical linguistic problems in our Translation Study. His assistance in editing the final report is also gratefully acknowledged.

to Mami Murakami, who began the Translation Study almost single-handedly, and whose "Sprachgefühl" in Japanese led to a number of insightful discoveries.

to Keiko Orito Yamamoto, who replaced Mami after her return to Japan, and who provided reliable assistance in coding works in the Translation Study and in coding responses in the Perception Study.

Special thanks are due to Charles E. Osgood, John B. Carroll, Takesi Sibata and the late Uriel Weinreich, all of whom gave valuable advice at various stages of the study.

The Perception Study and other related experiments were made possible only through the cooperation and assistance of the following professors and their students who offered their class time and their personal efforts: Professors Ichiro Shirato of Columbia University, Sayo Yotsukura of Georgetown University, Gen Itasaka of Harvard University, Frank Hoff and Mitsuki Kumekawa of Princeton University, John Tsu and Tadashi Kikuoka of Seton Hall University, Leonard Solomon and Morton Elfenbein of Boston University, James Holton and Thelma McIntosh of University of Hawaii, Masatoshi Seya of Aoyama Gakuin University, Kazuko Inouye of International Christian University, Moriji Sagara, Michio Watanabe and Hiroko Sato of Tokyo Women's Christian College, Kiyoshi Fujisawa of Fukui University, Takeshi Sugimura and Koji Tamase of Nara University of Education, Hiroto Katori of Tokyo University, Takesi Sibata of Gakushuin University, and Wolfgang Edelstein of Max-Plank Institute in Berlin.

Last but not least I wish to express my sincere thanks to Jane Ito, who handled administrative details, to Alice Inada, who offered excellent secretarial help, and to the members of my family, whose cooperation and patience during periods of work pressure gave me the strength to carry out this project to completion.

While many individuals took part in the organization, collection, and statistical analysis of the data, the responsibility for its interpretation rests solely with the writer.

Agnes M. Niyekawa-Howard

Massachusetts Institute of Technology
Cambridge, Massachusetts
March, 1968.

To the memory of Uriel Weinreich

TABLE OF CONTENTS

Page

I. SUMMARY 1

II. INTRODUCTION 4
    The adversative passive in Japanese 6
  Related Research 10
  Objectives 14

III. THE TRANSLATION STUDY 15
  Methods 16
    Samples 16
    Coding 17
    Establishing equivalence in translation 21
  Analysis and Findings 22

IV. THE PERCEPTION STUDY 32
  Methods 32
    Subjects 32
    Visual stimuli 33
    Response measures 33
    Administration 34
  Analysis and Findings 35
    The Questionnaire 35
    The Sentences 45

V. ADDITIONAL ANALYSES AND COMPARISONS 58
  Additional Analyses 58
    Presentation order analysis 58
    Birth order analysis 59
    Mode analysis: The Cognition Study 60
    Content analysis: The open-ended question 62
  Comparisons with Additional Samples 66
    Japanese-Americans from Hawaii 67
    Germans 69
    Japan - Hawaii comparison in pretesting 73

VI. CONCLUSIONS AND IMPLICATIONS 81

REFERENCES 86

APPENDIX 90
  Additional Tables 91
  Questionnaire 109
  Cartoon Booklet 119
  Sentences (English) 125
  Sentences (Japanese) 131
  Passages used in the Cognition Study 136

TABLES

Page

1. Chi Square Analysis of Type of Passive by Translation Equivalence in Japanese to English Translation 23
2. Chi Square Analysis of Type of Passive by Translation Equivalence in English to Japanese Translation 23
3. Types of Passive on Original and Translated Short Stories. . 27
4. Correlation between Relative Frequency of Passive and Indices of Time 30
5. Analysis of Variance of Question 7 on Responsibility 37
6. Japan - U.S. Comparison: Results of Analysis of Variance, Means and Standard Deviations 39
7. Japan - U.S. Comparison: Chi Square Analysis of Question 2 41
8. Japan - U.S. Comparison by Sex and Cartoon 42
9. Direction and Significance Level of Difference between Japan and U.S.: All Cartoons Combined 43
10. Japan - U.S. Comparison by Sex 46
11. Chi Square Analysis of English Sentences 48
12. Sentences Classification Used in Correlational Analysis . . 51
    a. Japanese Sentences
    b. English Sentences
13. Correlations of Responsibility Score to Causality Score and Choice of Passive Sentences 53
    a. Japanese Sentences
    b. English Sentences
14. Percentage of Passive Sentences Chosen in First and Second Languages 56
15. Japan - Mainland U.S. - Hawaii Comparison of Female Monolinguals: Means and Analysis of Variance 68
16. Japan - U.S. - Germany Comparison: Means and Analysis of Variance 71

17. Japan - U.S. - Germany Comparison: Mean Percentage of Attributed Causal Factors 72

18. Japan - Hawaii Comparison on Positive and Negative Outcomes: Means and Results of Analysis of Variance 75

19. Japan - Hawaii Comparison on "Negative Only" Cartoons: Means and Results of Analysis of Variance 78

20. Japanese and Hawaiian Means in "Negative Only" Cartoons by Status Relationship 79

Appendix

21. Description of the Sample of Japanese Short Stories: Title, Year of Publication, Author, and Author's Birthyear 92

22. Description of the Sample of English Short Stories: Title and Author 93

23. Frequency of Occurrence of Passives by Type: Japanese Original Short Stories 94

24. Frequency of Occurrence of Passives by Type: English Original Short Stories 95

25. Frequency Distribution of Passives by Degree of Translation Equivalence: Japanese to English Translation 96

26. Frequency Distribution of Passives by Degree of Translation Equivalence: English to Japanese Translation 97

27. Japan - U.S. Comparison on Responsibility by Subgroup, All Cartoons Combined 98

28. Japan - U.S. Comparison on Responsibility by Sex and Cartoon . 99

29. Japan - U.S. Comparison by Cartoon 100

30. Sex Comparison by Nationality 101

31. Chi Square Analysis of Japanese Sentences 102

32. Mean Scores for Questions 7 and 8 by Cartoon and Order of Presentation 105

33. Pictorial - Aural - Written Presentation Comparison: Means and Results of Analysis of Variance 106

34. Sentence Choice in Percentage for Female Samples from Japan, Mainland U.S., and Hawaii 107

35. Japan - U.S. - Germany Comparison: Mean Percentage of Attributed Causal Factors by Cartoon 108

I. SUMMARY

The relationship of cognitive framework to perception, thinking and second language learning was investigated in this psycholinguistic study. Cognitive framework is defined as the mental set commonly shared by people of a culture to selectively attend to certain dimensions rather than others in their perception and thinking. As a gradually established habit operating at a level below one's awareness, it is treated as an intervening variable entering between stimulus and response in this study. On the assumption that cognitive frameworks are different in different cultures, it was hypothesized that given the same stimulus, and given the same degree of freedom in responding, differences in responses by people of two different cultures are, aside from culturally determined response sets, mainly due to the intervening variable, namely the cognitive framework that selects from and organizes neutral stimuli in a culturally meaningful way. In effect, the study attempted to test the Whorfian hypothesis of linguistic relativity by investigating the influence of first language on perception, thinking and second language learning.

The particular cognitive framework that was the focus of this study was one resulting from a specific structural aspect of the Japanese language, namely the passive in traditional Japanese. The passive in traditional Japanese, as opposed to the more recently developed "translation style" passive, has the semantic function of connoting that the subject of the sentence was involuntarily subjected to something unpleasant. The traditional passive, therefore, is referred to as the adversative passive in this study. The adversative passive combines with the causative to form the passive causative, which has the connotative meaning that because the subject of the sentence "was caused to" take the action expressed by the main verb, he is not responsible for the act nor the outcome. While these meanings can be expressed in English just as well with the addition of a phrase or clause, such as "therefore I am not responsible for it," such an addition makes the expression overt and conscious. The grammatical expressions in Japanese, on the other hand, are covert and subtle. In fact, most native speakers of Japanese are not even consciously aware of the semantic functions these constructions have. It was thus hypothesized that the availability of these grammatical constructions would induce the speaker to interpret interpersonal events in terms of the semantic features present in the adversative passive and the passive causative relatively more frequently than speakers of a language lacking in these grammatical constructions, such as English.

The study consists of two main parts: translation and perception. The Translation Study investigated the cognitive frameworks of Japanese, on the one hand, and British and Americans on the other, by comparing short stories with their translated versions. Approximately twenty each of the Japanese short stories translated into English, and British and American short stories translated into Japanese were examined. In all cases, the translation was done into the first language of the translator. The passive passages in the Japanese version were compared with the corresponding passages in the English version to test the hypothesis that information regarding the semantic function of the Japanese passive will

be lost in Japanese to English translation, while in English to Japanese translation such information not present in the English original will be added by the translator. The hypothesis was supported at a highly significant level. Distortion in translation, in other words, was found to be in the direction of the translator's cognitive framework based on his first language. Some hypotheses regarding linguistic change in the use of the passive were posited and tested. The use of the translation style passive, which we claim to be a recent innovation, was found to be related to chronological variables, such as year of publication and year of birth of the authors, while the use of the adversative passive was not related to these chronological variables. The Translation Study was basically a study of linguistic performance.

The Perception Study examined the effect of cognitive framework on perception. Stick figure cartoons depicting interpersonal conflict situations with negative outcomes were used as visual stimuli; responses were measured by a questionnaire. On the basis of grammatical features of the adversative passive and the passive causative, the hypothesis was tested that Japanese would have a greater tendency than Americans to attribute responsibility for the negative outcome to others rather than themselves in an interpersonal conflict situation. Monolingual Japanese and American university students as well as Americans studying Japanese and Japanese majoring in English were used as subjects. While there was a great deal of fluctuation depending on the situation represented by the cartoon, the overall difference between Japanese and Americans was significant at the .001 level in the predicted direction. Japanese were found to have a greater tendency than Americans to attribute responsibility to others.

One part of the questionnaire consisted of pairs of sentences describing events in the cartoons. In the Japanese version, one of the sentences was in the active, the other in the passive. The English version had the connotative meaning of the Japanese passive expressed overtly, while the other sentence was a neutral, matter of fact statement in the active. Subjects were asked to choose the one statement in the pair that most appropriately described the cartoon situation in question. Americans studying Japanese and monolingual Japanese responded to the Japanese sentences, while Japanese students majoring in English and monolingual Americans responded to the English sentences. The hypothesis that Japanese subjects would choose the passive sentences in Japanese and the semantic equivalent of them in English more frequently than Americans would was only partially supported. Americans studying Japanese chose the passive in Japanese almost as often as the Japanese themselves did and much more freqeuntly than their monolingual counterparts (monolingual Americans) chose the semantic equivalent of the Japanese passive in English. This was attributed to their conscious application of what they had learned about Japanese grammar. The adversative meaning of the Japanese passive is pointed out in most American texts of Japanese grammar, while it seldom is mentioned in texts of Japanese grammar used in high schools in Japan.

In order to separate the role of language from other cultural factors in the perception of interpersonal events, two additional samples were tested. They were a small group of monolingual (English speaking) Americans of Japanese ancestry in Hawaii and Germans in Berlin. The major cultural factors outside language that are likely to induce the type of behavior we have observed among Japanese are heirarchical structure of interpersonal relationship in the society, and acquiescent tendency, both characteristic of an authoritarian culture. The above two groups were assumed to have received such cultural influences without getting the support from language that Japanese in Japan are getting. As far as the issue of attribution of responsibility is concerned, the findings were in the expected direction. The English speaking Japanese-Americans from Hawaii fell in between the American and Japanese groups. The difference between the Hawaii group and the mainland American group, however, was greater ($p < .05$) than the difference between the Hawaii group and the Japanese group from Japan ($p < .10$), suggesting that non-linguistic aspects of culture have a great influence on perception. The Germans on the other hand were more like Americans than Japanese on attribution of responsibility. The difference between the Japanese and Germans was significant at the .001 level, while the German-American difference was not significant. In other words, Japanese consistently showed a greater tendency to attribute responsibility to others than any other group tested. We would expect cultural factors other than language to exert influence on perception. However, it is suggested that if the language has features corresponding to themes present in the nonlinguistic aspects of the culture, language is likely to reinforce and solidify the perceptual habits induced by these nonlinguistic aspects of the culture.

Various other analyses and variations of the experiment were carried out. One of the major findings from these additional analyses was that Japanese have a tendency to attribute responsibility to others even when the outcome of an interpersonal conflict situation is positive. These response measures tended to be accompanied by corresponding grammatical expressions which were not part of the focus of this study. It therefore appears that this study on the passive tapped only one aspect of a larger pattern of language-perception relationship among the Japanese. In the larger pattern, two main factors appear to be present. They are an evaluative factor with a positive-negative dimension (whether or not the event was good, welcomed or pleasant) and a factor dichotomizing the world into ego and ego-related things vs. alter. The language used in describing interpersonal events seems to make use of these two features as the basis for choice of lexical items as well as of grammatical constructions. Correspondingly, these two factors appear to play significant roles in the perception of interpersonal events.

This larger pattern regarding the relationship between language and perception of interpersonal events among Japanese is still a hypothesis that needs to be tested. It emerged from the present narrower psycholinguistic study which had its focus on the passive constructions as related to the perception of interpersonal events with a negative outcome. Within the limited scope of this study, the findings in general supported the Whorfian hypothesis of linguistic relativity.

II. INTRODUCTION

Weinreich (1953) and others (Haugen, 1953; La[illegible], 1964) have pointed out that language learners systematically interpret the structure of a foreign language in terms of the structure of their native language. Therefore the more similar the linguistic structure of the foreign language to be learned is to one's native language, the easier the task of learning. Thus one of the most serious problems in learning a foreign language is to familiarize oneself with the quite different grammatical structure of that language. This problem becomes more severe with unrelated languages. Without a completely fresh frame of mind in learning the new language, the learner's old frame will dominate in his thinking and in the interpretation and construction of sentences in the second language.

While the Whorfian hypothesis of linguistic relativity does not have clear-cut support from psychological experimentation so far, it is generally agreed that the task of learning and teaching a foreign language cannot be successfully carried out in an ethnological vacuum. The meaning of the words in a language can be understood only in the context of the culture in which the language is spoken. Similarly, without comprehending the socio-psychological aspects of the culture, it is difficult for a non-native to understand the structure of a language such as Japanese sufficiently well so as to be able to use the various constructions correctly in performance. It is therefore important that the language learner become aware of the cultural and psychological framework which native speakers of the language use. This framework, hereafter in this paper to be called the cognitive framework, refers broadly to the cultural orientation that habituates people in that culture to attend selectively to certain dimensions rather than others in their perception and thinking.

The cognitive framework that we acquire from merely growing up in a particular culture has adjustment and survival value in that it enables us to economize our effort in perceiving only relevant material and organizing this material in a culturally meaningful way. It also has a delimiting effect in that it imposes on individuals standardized ways of doing and looking at things. Studies on creativity show the cumulative, delimiting effect of mass culture and education on children's imagination, perception and thinking (Getzels and Jackson, 1962; Torrance, 1963). By the time we reach adulthood, our ways of perceiving and thinking are so set within the culturally established cognitive framework that it becomes difficult not only to perceive or think in any other way, but even to realize that there are alternative ways available. Because the cognitive framework operates below one's level of awareness, it is difficult to tap or pinpoint it. This is also one of the reasons for the paucity of psychological experiments on the Whorfian hypothesis.

Sapir (Mandelbaum, 1958) refers to the cognitive framework mentioned above as "orientation." He points out that the ability to distinguish between the use of to fall and to fell (to cause to fall) among English speakers, or between *hangen* (to hang, be suspended) and *hängen* (to hang, to cause to be suspended) among German speakers does not require an ability to conceive of causality as such. The latter ability, he maintains, "is conscious and intellectual in character; it is laborious, like most conscious processes, and it is late in developing." On the other hand, the ability to feel and express the causative relation on hearing or using the causative verb "is unconscious and nonintellectual in character, exercises itself with great rapidity and with the utmost ease, and develops early in the life of the race and of the individuals." He then goes on to discuss this unconscious orientation as follows:

> We have therefore no theoretical difficulty in finding that conceptions and relations which primitive folk are quite unable to master on the conscious plane are being unconsciously expressed in their languages -- and, frequently, with the utmost nicety. As a matter of fact, the causative relation, which is expressed only fragmentarily in our modern European languages, is in many primitive languages rendered with an absolutely philosophic relentlessness. In Nootka, an Indian language of Vancouver Island, there is no verb or verb form which has not its precise causative counterpart.
>
> Needless to say, I have chosen the concept of causality solely for the sake of illustration, not because I attach an especial linguistic importance to it. Every language, we may conclude, possesses a complete and psychologically satisfying formal orientation, but this orientation is only felt in the *unconscious* of its speakers -- is not actually, that is, consciously, known by them (Mandelbaum, 1958, pp. 155-156, italics mine).

This unconscious orientation is the basis for the difference in perception in the linguistic relativity hypothesis of Sapir and Whorf. Thus Sapir in another article writes:

> Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society. It is quite an illusion to imagine that one adjusts to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the 'real world' is to a large extent *unconsciously* built up on the language habits of the group. ... We see and hear and otherwise experience very largely as we do because the language habits of our community predispose certain choices of interpretation (Mandelbaum, 1958, p. 162, italics mine).

The Adversative Passive in Japanese. Such an unconscious orientation or cognitive framework seems to operate among speakers of Japanese in their ability to use the adversative passive in the appropriate circumstances. The adversative passive is different from the passive in English in two ways. First, even an intransitive verb can be used in the passive form in an adversative passive sentence, and second, it has the semantic function of connoting that the subject of the sentence (in the surface structure) was adversely affected by the action. Examples of adversative passive sentences are given below.

Transitive: (1) Hanako wa inu ni kam - are - ta.
Hanako dog by bite pass. past

(Hanako was adversely affected by the dog biting her.)
(Hanako was bitten by the dog.)

Intransitive: (2) Hanako wa inu ni sin - are - ta.
Hanako dog by die pass. past

(Hanako was adversely affected by the dog dying.)

Transitive: (3) Hanako wa kodomo o inu ni kam - are - ta.
Hanako child dog by bite pass. past

(Hanako was adversely affected by the dog biting her child.)

As one can see from the above examples, the surface structures of sentences (1) and (2) are exactly alike except for the verb stem. The first sentence with a transitive verb is not distinguishable from a regular passive sentence since "to be bitten" in itself has a negative connotation. Thus the translation "Hanako was adversely affected by the dog biting her" is not much different in meaning from "Hanako was bitten by the dog" except that the empathy or sympathy for Hanako, expressed by the utterer of the sentence in the adversative passive, is more overtly expressed in the first translation. While Sentence (1) appears to have a structure equivalent to that of the English passive, Sentence (3) shows the unique structure of the adversative passive. It has an extra noun phrase, like Sentence (2), which comes from a higher level sentence in the deep structure. The presence of such an extra noun phrase in passive sentences makes Sentences (2) and (3) unambiguously adversative (Howard, 1967).

Semantically, the negative connotation of the Japanese adversative passive stands out more clearly when the verb phrase is neutral in meaning. For instance, in English, the active sentence "He mentioned me in his talk" and its passive equivalent "I was mentioned by him in his talk" do not differ in meaning except possibly in emphasis. The equivalent pair of sentences in Japanese, however, does differ. The active sentence has the same meaning as in English, but the passive sentence implies that being mentioned in the talk was not welcomed by the subject of the sentence. It may be that a negative reference was made in "mentioning," or that the subject preferred not to be mentioned at all. Whichever the case, the subject's (here the speaker's) feeling of having been involuntarily subjected to something unpleasant is expressed in the adversative passive. In other words, a statement which has no negative implication in the active comes to assume a distinctly negative meaning in the passive. While the translation style or "pure" passive, equivalent to the English passive,[1] is used in scholarly writing, passive sentences in colloquial Japanese tend to be of the adversative type carrying a negative connotation.

A Japanese speaker, therefore, makes a choice between the active and passive voice before he expresses an event. If a sick person, for instance, informs his wife that he had a visit from X at the hospital, he would say "X visited me today" in the active unless he was not in a mood to receive visitors or X was somebody he did not like, in which case he would report the event in the passive as "I was visited by X." This ability to make the appropriate choice and to correctly interpret utterances of others is unconscious. In fact, no reference is made to the adversative meaning of the passive in Japanese texts of grammar except in a handful of advanced grammar books, and few Japanese are consciously aware that they use the passive to express subtle feelings of resentment or victimization.[2]

---

[1] For a more detailed discussion of the difference between the "pure" passive and the adversative passive, see I. Howard, "The So-Called Japanese Passive" (1967), which was written as part of this project, and also his "Further Observations on the Japanese Passive" (1968).

[2] It might be added here that the writer who spoke Japanese during her 15 years of residence in Japan, was never aware of the semantic function of the adversative passive. It was only in the course of comparing the passive in Tagalog with that of Japanese in a linguistics course several years ago that she suddenly became aware of this aspect. At that point, she used her 79-year-old father, a native speaker of Japanese, as an informant, and he, too, for the first time, became conscious of the fact that hardly anything positive could be expressed in the passive in Japanese.

The adversative passive further combines with the causative to form the passive causative. The relationship between the active, adversative passive, causative and passive causative sentences is shown by the following set of examples.

Active:	Masako	wa	nai -	ta.				
	Masako		cry	past				

(Masako cried.)

Adv. Pass.:	Haha	wa	Masako	ni	nak -	are -	ta.	
	mother		Masako	by	cry	pass.	past	

(Mother was adversely affected by Masako crying.)

Causative:	Taroo	wa	Masako	o	nak -	ase -	ta.	
	Taroo		Masako		cry	caus.	past	

(Taroo caused Masako to cry.)

Pass. Caus.:	Masako	wa	(Taroo	ni)	nak -	ase -	rare -	ta.
	Masako		Taroo	by	cry	caus.	pass.	past

(Masako was caused to cry (by Taroo).)

The last sentence without the agent implies that it was not Masako's doing that resulted in her crying, but rather that something external acted on her and made her cry. Similarly the passive causative of "I wrote," namely "I was caused to write," has the connotative meaning, "I was adversely affected by someone causing me to write," and hence, "I did not write on my own volition; I was forced to write, therefore I am not responsible for what I had written (or for having written)." As the English translation indicates, the same idea or feeling can be expressed lexically without any difficulty in English.

According to Weinreich (1963), there are two chief devices for expressing attitudes toward the content of whole sentences by attitudinal formators. One is by special "modal" adverbs or particles, such as "fortunately," and the other by affixal mood categories of the verb, formed by affixes or auxiliaries, such as the optative. In our discussion throughout this paper, we refer to the former as "lexical" expression as opposed to the latter, which we refer to as "grammatical" expression or expression by "grammatical construction." While the feeling expressed grammatically in Japanese can be expressed lexically in English, there are some differences. Lexical expression is overt and strong, while grammatical expression is covert and subtle; the choice of lexical items in a lexical expression is likely to be carried out at a more conscious level than the choice of grammatical constructions in a grammatical expression.

The most common English expression equivalent to the passive causative is "had to." For instance, where a Japanese would say "Masako was caused to work" (by her family because of poverty), an American is likely to say "Masako had to work" without indicating whether this was so because of external pressure or inner compulsion (such as from guilt feelings), or both. Even expressions like "Masako was forced to work" or "Poverty drove Masako to work" do not make clear whether it was Masako herself or somebody else, such as her parents, who made the decision that Masako work because of poverty in the family. To make clear in English that it was not Masako's own decision would require an overt reference as to whose decision it was (or was not) and therefore a much longer and more complex sentence than the Japanese equivalent "Masako was caused to work." Because in Japanese the subject of a causative sentence has to be an animate noun, and because nonidentity of subject and object is required in a causative sentence, sentences like "Poverty caused Masako to work" or "Masako forced herself to do it" are unacceptable. Hence the passive causative "Masako was caused to work" excludes "poverty" as well as "Masako herself" as the possible agent or causal force. In other words, it can only mean that somebody else caused her to work.

The availability of grammatical constructions like the adversative passive and the passive causative suggests the ease with which such feelings can be expressed in Japanese as compared with English. From a social psychological point of view, the existence of these grammatical expressions is significant in the culture of Japan. Through the use of the adversative passive, the individual can subtly express his resentment of the action inflicted upon him, while overt expression of hostility or resentment in these situations would be unacceptable in a society where politeness and emotional control are emphasized. It is as if the language provides through its grammar a kind of safety valve to release pent-up frustration. The existence of the causative, which can be combined with the adversative passive, suggests that there is a mutual reinforcement of the structure of the Japanese language and the structure of Japanese society. The hierarchical structure of Japanese society emphasizes the superior-inferior status relationship in which the lower status person has to obey the higher status person. The individual in such a society finds greater security in following decisions made by a superior, and thus having the superior take the responsibility for the outcome, than in making his own decision and being responsible for his own action (Kerlinger, 1951; Niyekawa, 1959). The passive causative enables the speaker to subtly indicate that the locus of responsibility is outside, that his action was involuntary, and that he was only "subjected" to this unpleasant act which he performed.

The adversative passive and the passive causative together, then, afford to speakers of Japanese a means of expressing that the subject of the sentence was involuntarily subjected to something unpleasant. In the case of the adversative passive, the unpleasant act is performed by someone else, while in the case of the passive causative, the unpleasant act is performed by oneself, but it is unpleasant because external forces caused him to engage in an act he did not wish to engage in. It may be hypothesized, then, that the Japanese language, through some of its grammatical features, promotes a cognitive framework, or to use Sapir's term an unconscious orientation, to interpret events according to whether or not somebody acted negatively upon him.

If such a cognitive framework is in operation, it should be reflected in the perception and judgments of interpersonal events. There should also be a carry-over of the cognitive framework, as long as it remains unconscious, in learning a second language.

Related Research

The Whorfian hypothesis of linguistic relativity, namely the hypothesis that language influences the speaker's way of perceiving the world, has attracted the attention of many anthropologists, linguists, philosophers and psychologists. Until a decade and a half ago, most of the supporting data were of observational type culture themes, such as those used by Whorf himself. Since the early 1950s, psychologists started testing the hypothesis using rigorous scientific methods. The studies that have now become the "classical" experiments on the Whorfian hypothesis are Brown and Lenneberg's (1954) study on codability and Carroll and Casagrande's (1958) study of matching or grouping of pictures and objects. The former, an experiment on perception and recognition of colors, showed that codability or availability of single word color terms was related to accuracy of memory. Experiment II of the latter study compared the behavior of English dominant and Navaho dominant Navaho children in matching objects. The hypothesis that Navaho dominant children would match objects on the basis of similarity in shape and verb-stem classification rather than color because the language requires one to select verb suffixes according to these dimensions of the objects being handled was supported in the study. However, English speaking children in Boston, accustomed to blocks and form-board type toys, were found to match objects very much like the Navaho dominant children, and for this reason, the linguistic relativity hypothesis was not fully supported by this experiment.

In 1960, Fishman came out with a schematic systematization of the Whorfian hypothesis as follows (Fishman, 1960).

	Data of (Cognitive) Behavior	
Data of Language Characteristics	Language data ("cultural themes")	Non-linguistic data
Lexical or "semantic" characteristics	Level 1	Level 2
Grammatical characteristics	Level 3	Level 4

There are two factors involved in this schema, and both are dichotomous. The factor relating to language characteristics is divided into lexical or semantic, and grammatical, these characteristics being the predictor variables. The second factor pertains to the behavior of the speakers of the language, and these behavioral data are the criterion variables. Fishman considers Level 1 to be the weakest, and Level 4 the strongest in terms of conceptual and methodological sophistication. Level 4, which uses grammatical characteristics as predictor variables and non-linguistic data as criterion variables, is also the most demanding of all in that detailed technical training is required at both the predictor and the criterion ends of the relationship to be investigated. So far, Carroll and Casagrande's Experiment II (1958), mentioned before, is the only study at this level. If we dichotomize the criterion factor to large group phenomena vs. individual behavior with which the schema roughly coincides, according to Fishman, and include in individual behavior verbal data that are only indirectly related to the predictor variable, Ervin's (1962) study on the connotations of gender can be included in the cell at Level 4.

A number of studies related to codability have appeared in recent years (Koen, 1966; Lantz & Stefflre, 1964; Lenneberg, 1961; Stefflre, Vales & Morley, 1966) which have modified the conclusions from the original study by Brown and Lenneberg (1954). However, all of these studies fall into Level 2 of Fishman's schema and so do most other experiments carried out on the Whorfian hypothesis so far. Whorf, however, emphasized the structural or grammatical aspects of language more and more in his later years, as the following statements, written shortly before his death in 1941, indicate.

> Because of the systematic, configurative nature of higher mind, the "patternment" aspect of language always overrides and controls the "lexation" (Nāma) or name-giving aspect. Hence the meanings of specific words are less important than we fondly fancy. Sentences, not words, are the essence of speech, just as equations and functions, and not bare numbers, are the real meat of mathematics (Carroll, 1956, p. 258).
>
> . . . language consists of discrete lexation-segmentation (Nāma-Rūpa) and ordered patternment, of which the latter has the more background character, less obvious but more infrangible and universal . . . (Carroll, 1956, p. 269).

The idea, that grammar should have greater influence on perception and cognition than lexicon if language is to have any influence on these at all, appears to be sound. The freedom of choice of lexical items in the expression of ideas and concepts is great. When one cannot find the exact word with which to express one's idea, one can always use another related word and modify it with other words, while the freedom of choice of grammatical constructions is restricted. Meanings of words can change over time, new words can be created or borrowed as the need arises, but grammar is slow in changing. The choice of lexical items is carried out at a more conscious plane, and hence is under greater control of the speaker in comparison to choices made in grammatical constructions, which are almost automatic and unconscious for the adult speaker. Because ideas have to be expressed under the constraints of grammar, the relation between language and cognitive processes is likely to be stronger at the structural level.

Patterning, however, exists at the phonological and lexical levels of language also. The phonological system of a language is never arbitrary or random, but rather well systematized. A speaker of a particular language comes to develop a cognitive framework that makes him selectively attend to only those features which are significant in his own language. Hence, when an English speaker who is monolingual and not trained in linguistics is presented with a minimal pair of Chinese words, where the initial consonant is aspirated in one, and unaspirated in the other, he is likely to perceive the difference, if at all, in terms of voicing. The experiment by Horowitz (Brown, 1958) on the perception of vowel length by English and Navaho speakers or the study of discrimination of speech sounds by Liberman et al. (1957) suggests that selectivity in the perception of speech sounds is influenced by the sound pattern of the perceiver's language. At the lexical level, patterns emerge when componential analysis is used in the study of folk taxonomy (Conklin, 1955; Frake, 1961). The semantic components found in folk taxonomy apply to a range of generic terms within a specific domain of culture. In this respect, componential analysis is different from just finding the criterial attributes, as defined by Bruner, Goodnow & Austin (1956), of books as opposed to magazines. A study of semantic components in folk taxonomy usually reveals that each component is the criterial attribute for a number of sets of generic categories. In other words, the semantic components form a pattern. A Subanun, in making the decision of what "name" to apply to an instance of "being sick" would have to utilize the components essential in the folk taxonomy of diseases in his culture (Frake, 1961). Yet these patterns of semantic components remain largely unconscious, as do the phonological and grammatical patterns. At the lexical level, then, a study of the relationship of patterns of semantic components to perception and cognitive processes is likely to be more fruitful and meaningful in terms of Whorf's later version of the hypothesis.

In addition to these points mentioned above, the following psychological considerations tend to suggest that some relationship would be found between the structure of a language and the cognitive processes of its speaker if a perfect experiment were possible. It is now well established in psychological theories of perception and cognition that perception and memory are selective and distorted. This means that the distorted percept undergoes further change while it is stored in memory. The change is towards a meaningful whole--ambiguous stimuli get structured, irrelevant details drop out, relevant points become sharpened, and unfamiliar or neutral objects are assimilated to more familiar ones. However, what is considered to be relevant, meaningful or familiar depends on the individual perceiver. Studies have shown that the individual's situational needs as well as his attitudes and personality are factors contributing to selectivity and distortion (Levine, Chein & Murphy, 1942; Witkin et al., 1954).

In recent years there have been several significant cross-cultural studies in perception. In one study carried out in Africa, Allport and Pettigrew (1957) found that rural Zulu children not exposed to rectangular shaped objects were less inclined to see the visual illusion of the Ames trapezoid at a close distance as compared with city-dwelling Zulu children who were used to seeing rectangular objects, such as windows in Western style architecture. In other words, those who were used to seeing rectangular objects were susceptible to the visual illusion created by the rotating trapezoid; those not exposed to rectangular objects saw the stimulus without a set framework and therefore were able to perceive the objective phenomenon. Segall, Campbell and Herskovits (1966) obtained responses to optical illusions, including the Müller-Lyer, from nearly two thousand individuals in 15 different societies. They found significant differences between Western and non-Western samples. Their concluding paragraph of the large scale study is quoted below.

> We have reported here a study that revealed significant differences across cultures in susceptibility to several geometric, or optical, illusions. It should be stressed that these differences are not "racial" differences. They are differences produced by the same kinds of factors that are responsible for individual differences in illusion susceptibility, namely, differences in experience. The findings we have reported, and the findings of others we have reviewed, point to the conclusion that to a substantial extent we learn to perceive; that in spite of the phenomenally absolute character of our perceptions, they are determined by perceptual inference habits; and that various inference habits are differentially likely in different societies. For all mankind, the basic process of perception is the same; only the contents differ and these differ only because they reflect different perceptual inference habits (Segall, Campbell and Herskovits, 1966, pp. 213-214).

The discussion above points to the tendency for cultural selectivity and distortion, which we have termed the cognitive framework, to exert a greater influence in situations where ambiguity is involved. The best designed experiments on the Whorfian hypothesis so far used linguistic data related to physical properties of the stimuli, such as dimensions of color, shape, or size of visual objects. A greater amount of selectivity and distortion may be expected in perception and memory of interpersonal behavior situations, which are less structured and which allow for greater freedom for organization and interpretation by the individual.

Objectives

The objective of the study was to examine the effect of the presence or absence of certain grammatical features in a language on perception, thinking and second language learning through the operation of a cognitive framework. In effect, the study was a test of the Whorfian hypothesis at the structural level.

Cognitive framework is defined as an unconscious mental set shared by people of a culture to selectively attend to certain dimensions rather than others in their perception and thinking. As a gradually established habit operating at a level below one's awareness, it is treated as an intervening variable between stimulus and response in this study. On the assumption that cognitive frameworks are different in different cultures, it is hypothesized that given the same stimulus, and given the same degree of freedom in responding, differences in response by people of two different cultures are, aside from culturally determined response sets, mainly due to the intervening variable, namely the cognitive framework that selects from and organizes neutral stimuli in a culturally meaningful way.

The specific grammatical features considered in this study were the adversative passive and passive causative in Japanese, discussed in the previous section. English, lacking in these grammatical constructions, is the language with which Japanese was compared.

The study consisted of two major parts: (I) the Translation Study, and (II) the Perception Study. The Translation Study was essentially a study of linguistic performance (as opposed to linguistic competence, Chomsky, 1965). It was called the "translation study" because the study compared original Japanese and English short stories and excerpts from novels with their translated versions in English and Japanese. It was a content analysis of the passive constructions that appeared in the Japanese versions of the stories, and a comparison of each occurrence with its translation equivalent in the English version. The translation study involved syntactic and semantic analyses of the Japanese passive. The perception study was a cross-cultural comparison of responses of university students to visual stimuli depicting interpersonal conflict situations.

The two studies are discussed separately in the following chapters.

III. THE TRANSLATION STUDY

The major purpose of the Translation Study was to investigate the effect of the cognitive framework of the translator on his translation. The study, however, developed into a large-scale study on linguistic performance (as opposed to competence, Chomsky, 1965), as a result of the analysis required for the study of "translation." In the latter half of this chapter hypotheses regarding the acquisition of the passive and the linguistic change of the passive are developed and tested. We will, however, first deal with the original purpose of the Translation Study.

The presence or absence of the particular cognitive framework in the translator of short stories was expected to be reflected in his translation. Thus the following hypotheses were tested.

Hypothesis Ia: In Japanese to English translation, it will be found that a large proportion of the adversative passive occurrences (including the passive causative), are not translated semantically (lexically) into English.

Hypothesis Ib: In English to Japanese translation, cases will be found where the use of the adversative passive (including the passive causative), in the Japanese version is not justified on the basis of the original English text. That is, there will be cases in which extra meaning is read into an interpersonal situation.

Hypothesis Ic: Relative frequency of occurrence of the adversative passive (including the passive causative), in translated short stories will be lower than in indigenous Japanese short stories.

The first two hypotheses are concerned with the cognitive framework of the translator. It appears that the direction of translation preferred by the translator is from a foreign language into his first language. All the translations from English to Japanese in our sample had been done by native speakers of Japanese, while all the translations from Japanese to English had been done by native speakers of English. Hence, it may be assumed that the American or British translator would find the connotative meanings of the adversative passive and passive causative superfluous and nonessential, since he does not have the cognitive framework to be sensitive to these. The Japanese translator, on the other hand, may perceive an interpersonal situation described in English in terms of these dimensions and translate according to the Japanese cognitive framework. Hypotheses Ia and Ib are based on these assumptions.

Hypothesis Ic has to do with "translation style" Japanese. Translation style is a style of Japanese commonly used in translation, in which some traditional rules of grammar are modified. Some of the characteristics of translation style are as follows:

(a) The inclusion of a subject in almost every sentence. In traditional Japanese subjects as well as other noun phrases are omitted whenever understood. In other words, where a pronoun replaces a noun in an English sentence because of previous reference, the equivalent sentence in Japanese would have that noun phrase deleted.

(b) The frequent use of kare for "he" and kanozyo for "she" as a result of the subject inclusion discussed above. These pronouns seem to have come into existence as a result of translation from Western literature. They are not used by older generation Japanese in colloquial speech.

(c) The use of inanimate nouns as the subject of a passive sentence, which was unacceptable in traditional Japanese.

(d) The use of a determiner before a noun phrase, such as the equivalents of a, the, his, her, my, this, that, these, any, every, each, some, numerals, etc., even though no determiner is required in Japanese, and when it is more common to place, any, every, some, many, and numerals after the noun phrase in traditional Japanese.

(e) The use of stereotyped translation phrases.

The tendency to fall into this pattern seems to be due to the translator's effort to make the translation as close to the original as possible. The intellectual in Japan has become so used to translation style sentence structure from the flow of translated Western literature that he may write original articles of his own in translation style. In fact, not only is translation style the preferred style now in scientific and scholarly writing, but more and more articles, stories and advertisements in newspapers and magazines for popular consumption are showing some of the translation style characteristics. Even though to the ears of the common man, translation style Japanese is still unnatural, it is gaining an ever-increasing acceptance. Because of its affinity to Indo-European syntax, translation style tends to counteract the operation of the Japanese cognitive framework. It is this aspect that Hypothesis Ic attempted to investigate.

Methods

Samples. From the population of all short stories and novels already translated from Japanese to English, and from English to Japanese, one sample of 22 Japanese, and another of 21 English, short stories and excerpts from novels were selected to make up 200 printed pages for each sample. (See Tables 21 and 22 in the Appendix.) In order to control for variations in the style of authors and translators, selection was made to include as many different authors and translators as possible.[3] The 22 works in the first sample were written by 20 Japanese authors and translated by 12 British and American translators; the 21 works in the second sample were written by 19 British and American authors and translated by 19 Japanese translators. Since checking of the translation was based on Japanese grammatical categories, the Japanese version of these short stories was used in determining the page as a unit whichever the direction of translation.

Coding. All occurrences of the passive, that is adversative passive, passive causative, and translation style passive, on the pages included in the sample were to be noted and compared with their English translation equivalents. It should be emphasized again that since this study dealt with actual occurrences of passive constructions in the literature, it was primarily a study of linguistic performance and not of competence (Chomsky, 1965).

What was assumed to be a simple task of marking all the verb phrases with the passive morpheme -(r)are- or the causative -(s)ase- combined with the passive -rare- as -(s)ase-rare- turned out to be an enormously complex problem. Codes were set up to differentiate the different types of passive. However, the codes had to be revised over and over again as new ambiguous cases called our attention to additional types of usage of the passive, or of sentence constructions that contained the passive. This required a theoretical investigation into the syntactic and semantic aspects of the particular type of passive sentence each time, and resulted in a number of discoveries.

For instance, while we were interested only in the passive -(r)are-, we were sometimes forced to deal with the three other kinds of -(r)are- because of ambiguity or overlapping meanings. The three other functions of -(r)are- are potential, automatic and honorific. The potential -(r)are-, often shortened to -(r)e-, functions very much like the English suffix -able, and is thus very productive. The automatic -(r)are- is used with a limited set of verbs to express spontaneous or uncontrollable, usually emotional, reactions. The honorific -(r)are- does not add any meaning to the verb it is suffixed to except to show respect to the person who is the subject of the verb. The various usages of *-(r)are-* are syntactically distinguishable in sentences where no noun phrase deletion has taken place. Examples are given below.

---

[3] Japanese short stories were selected from D. Keene (Ed.), Modern Japanese Literature: An Anthology (1960), and I. Morris (Ed.), Modern Japanese Stories (1965). English short stories were selected mainly from among four volumes of Sekai Tampen Bungaku Zenshū (A Collection of Short Stories of the World) (1962-64).

Automatic: (4)

Kono	ko	no	yukusaki	ga	anzi	-	*rare*	-	ru.
This	child	of	future		worry		auto.		present

(One cannot help worry about the future of this child.)

Potential: (5)

Kono	hon	wa	kodomo	ni	mo	yom	-	*are*	-	ru.
this	book		child	by	even	read		pot.		present

(This book can be read even by children.)

Honorific: (6)

Sensei	wa	kono	hon	o	yom	-	*are*	-	ta.
teacher		this	book		read		hon.		past

(The teacher read this book.)

Translation passive: (7)

Ano	hon	wa	hiroku	yom	-	*are*	-	ta.
that	book		widely	read		pass.		past

(That book was widely read.)

Adversative passive: (8)

Watasi	wa	kodomo	ni	*Pureeboi*	o	yom	-	*are*	-	ta.
I		child	by	*Playboy*		read		pass.		past

(I was adversely affected by my child reading *Playboy*.)

These structurally unambiguous sentences, however, become ambiguous with noun phrase deltion. In Japanese, the noun phrase can be deleted whenever understood. An example of ambiguity arising from noun phrase deletion follows.

(9)

Anata	*ga*	sonna koto	o	iw	-	*are*	-	te mo,	watasi wa . . .
you	nom.	such things	accus.	say		hon.		even though	I

(10)

Anata	*ni*	sonna koto	o	iw	-	*are*	-	te mo,	watasi wa . . .
	'by'					pass.			

In the first sentence above, the nominative postposition *ga* indicates that *anata* (you) is the subject, hence the meaning of the sentence is "Even though you say (honorific) such things, I . . . ." The second sentence has the subject noun phrase *watasi wa* (I) already deleted, and has *anata* (you) as the agent in a passive sentence, thus the sentence means "Even though I am told such negative things by you, I . . . ." However, *anata* (you) can be deleted when understood, and with the noun the postposition which serves as a case marker also gets deleted. The result is that two structurally and semantically different sentences can have the same surface structure. With cases like this, we had no choice but to resort to the meaning of the surrounding context in order to obtain additional cues for coding.

The final code established for the classification of the passive -(r)are- was as follows:

1. P_1 . . . Adversative Passive: intransitive verbs in the passive without a supporting negative[4] context.

   e.g. (11) Haha ni inaka e ikareta.

   (I was adversely affected by my mother leaving for the country.)[5]

2. P_2 . . . Adversative Passive with semantic support from the context: the adversative meaning of the passive is reinforced by the verb itself having a negative meaning, or by the presence of an adverb with negative meaning.

   e.g. Sentences (1), (2), (3) at the beginning of this paper.

   (12) Ani ni naisyo ni site ita tegami o yomareta.

   (I was adversely affected by my brother reading the letter I kept secret.)

3. P_3 . . . Non-adversative Passive: the positive meaning of the verb itself or the presence of favorable meaning words or phrases in the context cancelling the adversative meaning of the passive.

   e.g. (13) Sensei ni homerarete uresikatta.

   (I was happy because I was praised by my teacher.)

4. P_4 . . . Automatic Passive: similar in meaning to -(r)are- in the automatic (zihatu), but structurally different in that the

---

[4] "Negative" in this text is to be interpreted as adversative in meaning and should not be confused with negation.

[5] A subjectless Japanese sentence in isolation is usually assumed to have the subject "I" deleted except in statements of generality. The subject "I" is thus inserted in the English translation of such sentences.

agent is expressed by a noun phrase with ni. Restricted class of idioms expressing feelings and emotions; cannot be used in the active.

e.g. (14) Masako wa piano no sensei ni kokoro o hikareta.

(Masako was attracted to her piano teacher.)

(15) Midori wa kyuu ni kyoohu ni osowareta.

(Midori was suddenly seized by fear.)

c.f. zihatu

(16) Mukasi no koto ga omowareta.

(Things of the past came to mind.)

5. P_5 . . . "Pure" Passive I (Translation Style Passive): inanimate nouns used as the subject of passive sentences.

e.g. (17) Kono hon wa hiroku yomarete iru.

(This book is widely read.)

6. P_6 . . . "Pure" Passive II: animate nouns as the subject of passive sentences; neutral, non-adversative in meaning.

e.g. (18) Suzuki wa kootyoohitu ni annai sareta.

(Suzuki was led into the principal's office.)

7. C . . . Passive Causative: the passive of causative sentences.

e.g. (19) Boku wa aitu ni hazi o kakasareta.

(I was caused to bring disgrace upon myself by that fellow. - That fellow humilated me.)

The labels for the categories should be considered as having been temporarily assigned for want of better terms. As can be seen, our plan to base the classification on syntax alone could not be realized. For instance, we had expected that passive sentences without any negative or positive meaning words in the context would fall into P_1 Adversative Passive. However, when we came across sentences like (18), when nothing negative could be found even in the larger context of the paragraph, we felt that this could not be classified as P_1. Thus a new category P_6 was set up. Sentences falling into this category tended to be matter of fact statements of description. They may be considered an extension of the translation style. However, this is still a question that needs to be answered by an historical investigation.

Establishing equivalence of translation. Comparison of the original work with its translated version was done only with a focus on the Japanese passive. Unlike translation exercises in foreign language courses, where accuracy of translation is emphasized, translation of literary works places importance on readability in terms of the flow of description of events, ideas, feelings and emotions. Hence, in literary translation, sentence-for-sentence translation could not be expected, not to speak of word-for-word translation. Often a clause in Japanese was reduced to an adverbial phrase of manner in English, or an adjective in English expanded to a clause in Japanese. Thus the code on degree of equivalence was set up as follows in comparing Japanese passive passages with their English counterparts.

1. + Addition of information: the English version contains more information than the Japanese version. Includes cases where the adversative meaning of the Japanese is more strongly expressed in the English version.

2. = Equivalent: the passive in Japanese is translated into or from an English passive, or active where the agent in Japanese corresponds to the subject in English, without difference in meaning.

3. = Equivalent except for non-redundancy of -(r)are-: the presence of negative meaning words in the context makes the adversative meaning carried by the passive redundant, hence the English version is equivalent even without regard to the passive in Japanese.

4. = Equivalent in gist: the translation is a paraphrase, but the two versions are essentially equivalent in meaning.

5. - Loss of information: the English version does not contain as much information as the Japanese version. Includes cases where the adversative meaning of the passive is absent in the English version.

6. -+ Different: there is a difference in the meaning between the English and Japanese versions. Includes cases where the adversative passive is put in the active in English, resulting in difference of meaning.

   e.g. (20) Kimika wa motimono o osaerareta.

   ("Kimika was subjected to having her belongings seized." Translated as "Kimika left her belongings.")

7. 0 Omitted: the passage containing the passive in the Japanese version is omitted (nonexistent) in the English version.

The same code was used for comparisons of Japanese to English translation and English to Japanese translation, since the Japanese text served as the basis. Hence "loss of information" in the Japanese to English translation becomes "addition of information" in English to Japanese translation.

Analysis and Findings

The first two hypotheses deal with the translator's cognitive framework. It was hypothesized that the connotative meanings coming from the grammatical structure of sentences in the adversative passive and passive causative will frequently be left unexpressed in English by British and American translators. The opposite tendency, namely the tendency to interpret English sentences in terms of the Japanese cognitive framework and thus translate into the adversative passive or the passive causative, was expected to be found among Japanese translators.

Tables 25 and 26 in the Appendix show the frequency distributions of all the passives by degree of translation equivalence. As Table 25 indicates, approximately one fifth, or 18 percent, of the occurrences of passives in the Japanese original stories had to be omitted from the comparison because paragraphs were skipped or condensed in translating the stories into English.

Each of the two tables was collapsed into a two-by-two table by dichotomizing both variables. The seven types of passives were grouped into adversative (P_1, P_2, and C) vs. all others (P_3, P_4, P_5, and P_6), the six categories of translation equivalence into equivalent (2, 3, and 4) vs. not equivalent (1, 5, and 6). The resulting tables and chi square values are given in Tables 1 and 2.

Insert Tables 1 and 2 about here

The most outstanding feature of the two chi square tables is the difference in the proportion of the two major categories of passives that are "not equivalent" in translation. More than 50 percent of the adversative passive passages are in the "not equivalent" category, while only less than 10 percent of the other types of passives fall in this category. The chi square values are far beyond the .001 level of significance for both Japanese to English and English to Japanese translations. It can be seen from Tables 25 and 26 in the Appendix that the "not equivalent" category consists largely of items that had information lost in Japanese to English translation, and information added in English to Japanese translation (Category 5). A few actual examples of these are given below.

Table 1. Chi Square Analysis of Type of Passive by Translation Equivalence in Japanese to English Translation

	Translation Equivalence		
Type of Passive	Equivalent	Not Equivalent	Total
Adversative	145	196	341
All Others	405	40	445
Total	550	236	786
	χ^2 = 217.41***	(p < .001)	

Table 2. Chi Square Analysis of Type of Passive by Translation Equivalence in English to Japanese Translation

	Translation Equivalence		
Type of Passive	Equivalent	Not Equivalent	Total
Adversative	130	159	289
All Others	567	21	588
Total	697	180	877
	χ^2 = 362.03***	(p < .001)	

Japanese to English translation:

Japanese original: ". . . Yosihide ga mokuzen de musume o yakikorosarenagara . . ." (R. Akutagawa, "Jigokuhen" in Gendai Bungaku Zenshū, Vol. 26, 1953, p. 75)

English translation: ". . . Yoshihide[6], who saw his daughter die in flames before his eyes . . ." ("Hell Screen," translated by Norman, in Keene, 1960, p. 331)

The English translation in the above example can be used even when Yosihide himself had his daughter burned to death, or even if he was glad to get rid of a daughter he did not like. Of course, since the context supplies evidence to the contrary, the translation as it stands is adequate. However, because the translation does not exclude the suppositions above while the original sentence in the Japanese clearly does, this was coded as "5: loss of information (the English version contains less information than the Japanese version)." The literal translation of the Japanese clause is: "Even though Yosihide was subjected to adversely affected by) his daughter being burned to death before his eyes . . ." The translator may have chosen not to express the connotation present in the adversative passive for reasons of style and fluency. He may have felt that it was not necessary, and that to do so would be redundant, while the Japanese writer would prefer to put the expression in the adversative even when it is redundant. The presence or absence of the cognitive framework seems to dictate what the preference is. In English to Japanese translation, we see the same phenomenon working in the opposite direction.

English to Japanese translation:

English original: "No. Always no. Five months of ceaseless interrogation and the inevitable negative." O. Henry, "The Furnished Room" in Henry, 1909, p. 242)

Japanese translation: "Dame da. Mata dame da. 5 kagetsu to iuu mono yasumi nasi ni tazunetudukete kita ga itu demo kimatte kubi o yoko ni hurareru." ("Kashima," translated by Nishida, in Sekai Tampen Bungaku Zenshū, Vol. 13, 1964, p. 313)

---

[6] In romanizing Japanese sentences, the phonemic transcription has been used throughout the text. Names of authors, titles of books and names of publishers, however, have been given in the widely used Hepburn system.

The above appears in the context where a man had just asked the landlady whether she had known a particular girl among her lodgers and gets a "no" as the answer. The literal translation of the Japanese is: "Unsuccessful. Again unsuccessful. (He) had been ceaselessly investigating the past five months, but without exception (he) is always subjected to (the other person) shaking his head sideways." A noun phrase in English, "the inevitable negative," gets translated into an adversative passive sentence, subtly expressing the emotional reaction of the character in the story. The Japanese translator used his Japanese cognitive framework in his translation, probably for style as well as for effect on the Japanese readers. The translated version therefore has information added to the original version, and is thus coded as "5: addition of information (the English version contains less information than the Japanese version)."

English original:	"I put on my dark glasses to shield my eyes from the sun and conceal my recognition from her eyes . . . It is discouraging to put on sun glasses in the middle of someone's intimate story." (M. S. Spark, "The Dark Glasses" in Spark, 1961, p. 110)
Japanese translation:	"Watasi wa, me kara yookoo o saegiru tame, mata, kanozyo ga nanimono de aru ka ga wakatta no o kidoraremai to site, kuroi megane o kaketa . . . Utiakebanasi no saityuuni, aite ni sangurasu o kakerareru no wa, dare ni siro ii kimoti no suru mono dewa nai." ("Kuroi Megane," translated by Kudō, in Sekai Tampen Bungaku Zenshū, Vol. 2, 1962, p. 285)

There are two cases of Category 5 (the English version contains less information than the Japanese version) in the above passage. The literal translation of the Japanese passage is: "In order to block the sun from my eyes and in order not to be adversely affected by her noticing that I knew what kind of person she was, I put on my dark glasses. . . It is certainly not pleasant for anybody to be subjected to the listener putting on dark glasses in the middle of one's intimate story."

These examples show how the English translator tends to disregard the connotative meaning of the adversative passive, while the Japanese translator tends to read adversative meaning into the English original. If these mild distortions in translation were due to chance, we should find them only as often as nonequivalence of translation found in other types of passives, such as "she is said to be . . ," translated into "she is known to be . . .", or "the affair between Mother and you was written there in Mother's own words . . ." (Inoue, 1956, p. 303) to "there, in frank language, was the affair between Mother and you" (Saito, in Morris, 1965, p. 426). However, as the chi square values in Tables 1 and 2 indicate, the disproportionate distributions we obtained can occur by chance less than once in a thousand times. Hypotheses Ia and Ib were thus supported.

Hypothesis Ic, in effect, compares the style of Japanese in original Japanese short stories and that in short stories translated from English. By considering only the adversative passive (P_1, P_2, and C) and the translation passive (P_5), and omitting the intermediate stages (see discussion later in this chapter), we obtain the following chi square table (Table 3) from Tables 23 and 24 in the Appendix.

Insert Table 3 about here

The chi square value of 47.20 is significant at the .001 level. For an equal number of pages of text, the adversative passive appeared much more frequently in original Japanese writings than in translations, while the opposite was true for the translation style passive. In fact, the proportions are almost exactly inverse: about 60 percent adversative and 40 percent translation style passive for original stories, and 40 percent adversative and 60 percent translation style for translated stories. Thus the hypothesis that the frequency of occurrence of the adversative passive in relation to the translation style passive will be higher in indigenous Japanese short stories than in translated short stories was supported.

It is interesting to note that while on the one hand, there is a tendency among Japanese translators to interpret English sentences in terms of the adversative passive, their use of the adversative is significantly less frequent than that of authors who write in Japanese from the start. The major reason for the difference is assumed to be due to the operation of the cognitive framework in one case, and to the act of translation counteracting its operation in the other. However, this is not discernible from the available data alone. It is possible that the difference is due to other factors, such as personality, social and educational background, age, etc. For instance, it is quite likely that the translator's identification is with the academic world ("scholar of English") while that of the novelist is with the artists' world ("creative writer"), and attitudinal difference of this type may affect their choice of style in writing to some extent. Unfortunately, we were not able to obtain adequate biographical information, such as birth date, education, publications, etc. on the majority of the translators to do any correlational analysis. A few of the translators have published original works. It would be interesting to compare the style of Japanese in original and translated works by the same writer some day.

Adequate biographical information, however, was available for the authors of original Japanese short stories. We were particularly interested in the year of birth of the authors and the year of first publication of the short stories under study. Year of publication of the short stories ranged from 1889 to 1954, year of birth of the authors ranged from 1864 to 1925, and age of the authors at the time of publication ranged from 18 to 65. (See Table 21 in the Appendix.)

Table 3. Types of Passive in Original and Translated Short Stories

Type of Passive	Frequency Original Short Stories	 Translated Short Stories	Total
Adversative (P_1, P_2, C)	429	290	719
Translation Style (P_5)	294	413	707
Total	723	703	1426
	χ^2 = 47.20*** ($p < .001$)		

It was pointed out previously that translation style is the style used in scholarly writing, but it is also becoming more and more prevalent outside the intellectual circle. On the one hand, then, we see a change with time, and people born more recently are exposed to translation style at an earlier age than people born earlier. In other words, looking at the influence of translation style diachronically, we would expect a negative correlation between year of birth of the author and the relative frequency of his use of the translation style passive. On the other hand, looking at the influence of translation style synchronically, it would be expected that whatever the age of the author, he would tend to be influenced by the prevailing convention of the time. That is, an author, who at age 20 did not use translation style to a great extent, may do so at age 40 if it is fashionable at the time. Hence the correlation of the use of translation style passive with year of publication is likely to be higher than that with author's year of birth.

In comparison to the translation style passive, which is learned during the course of formal education and through reading, the adversative passive is acquired earlier in life during the language acquisition period. While we know of no psychological study nor systematic linguistic analysis so far that distinguishes between the traditional passive and the translation style passive, we maintain that the traditional Japanese passive is adversative and that the translation style passive developed analogically from it (Howard, 1967). In our codes, P_1, P_2, and C are the traditional passive, and P_5 represents the most extreme translation style passive. P_3 and P_6 are assumed to be intermediate, that is the traditional style passive was extended to P_5 (inanimate nouns used as the subject of a passive sentence) through stages P_3 (the adversative meaning being cancelled out lexically by inserting positive meaning adverbs and other words in the context), and P_6. P_6 is structurally the same as P_5, but has animate nouns as the subject like in traditional passive, yet does not carry the adversative meaning. An alternative hypothesis to the above is that P_6 came after P_5, that is, after familiarity with expressing abstract ideas neutrally through the use of P_5, people may have extended such neutral semantic interpretation from P_5 to P_6. P_4 being a non-productive category consisting of a class of restricted idiomatic expressions, it is assumed to be least influenced by the passage of time.

Based on our position that the traditional Japanese passive and the translation style passive are distinct, we also hypothesize the order in which these two types of passives is learned. If our hypothesis is correct, the traditional passive, namely the adversative, should be more deeply rooted at an unconscious level of the speaker. Few mothers, however educated they may be, would use the translation style passive in speaking to their small children. Even the modern writer who uses the translation style passive proportionately more frequently than the adversative is assumed to have learned the adversative first. While translation style as a whole, of which P_5 is only a part, may consciously be perceived as "fancier" or "more sophisticated," the adversative is by no means looked down on. In fact, people are not consciously aware of the adversative being a different kind of passive. Because the two passives do not serve the same functions such that one can replace the other, and thus are not in a relation to each other as a substandard dialect is to a later-learned standard dialect, there is no reason to expect that the adversative passive will gradually be pushed out by the translation style passive as the latter becomes more and more prevalent. Stated differently, we should not expect any significant correlation between the relative frequency in the use of the adversative and any index of time.

The following two hypotheses were suggested and tested.

Hypothesis Ie: The relative frequency of occurrence of the translation style passive will be negatively correlated with both the author's year of birth and with the year of publication. The correlation, however, will be higher for year of publication.

Hypothesis If: The relative frequency of occurrence of the adversative passive will have no significant correlation with either the year of birth of the author nor with the year of publication.

Relative frequency was defined as the mean frequency of occurrence per printed page. The results based on the Spearman rank order correlation are shown in Table 4.

Insert Table 4 about here

The relative frequency of occurrence of the translation style passive is negatively correlated with both the author's year of birth and with the year of publication. Both correlations are significant at the .01 level. The correlations mean that the more recently the author was born or the work published, the higher the occurrence of translation style passives per page. The correlation for the author's year of birth was found to be higher than that for year of publication. Thus the latter half of Hypothesis Ie was not supported.

Hypothesis If was fully supported. There was no significant correlation between either index of time and the relative frequency of occurrence of the adversative passive (Table 4). In other words, the frequency of occurrence of the adversative passive per page is not related to the author's year of birth nor to the year of publication, but rather it is independent of time. The increase in the use of the translation style passive apparently has not stamped out the use of the adversative passive.

Table 4. Correlations between Relative Frequency of Passive and Indices of Time

Type of Passive	Time Author's Year of Birth	Year of Publication
Translation Style (P_5)	-.68**	-.58**
Adversative (P_1, P_2, & C)	.14	.01

** $p < .01$

In summary, the translation study showed that there tended to be a fairly consistent pattern of distortion in translation, and that this distortion was in the direction of the translator's cognitive framework based on his first language. Our claim that the translation style passive is a recent innovation found indirect support in a correlational analysis.

IV. THE PERCEPTION STUDY

The second part of the study dealt with perception, or more specifically with the relationship between language and perception. The availability of the adversative passive, including the passive causative, to native speakers of Japanese was expected to encourage them to perceive visual stimuli relevant to interpersonal events in terms of these expressions through the operation of their cognitive framework. Americans, lacking such a cognitive framework, were used as the major comparison group, although data from samples of Japanese in Hawaii and Germans in West Berlin were obtained later in an attempt to separate language from culture. The following hypotheses relate to the Japanese-American comparison.

Hypothesis IIa:	There will be a difference in the perception of Japanese and Americans. Japanese will tend to attribute responsibility to alter (as opposed to ego) more than comparable groups of Americans will.
Hypothesis IIb:	Foreign language majors will show a carry over of the cognitive framework from their first language even when they respond in their second language.

Methods

Subjects. Four groups of subjects were used for the Japanese-American comparison: one group each of Japanese and Americans who are not foreign language majors, one group of Japanese majoring in English, and one group of Americans majoring in or studying Japanese. For convenience of reference, the first two groups will be referred to as "monolinguals," the last two groups as "language majors," although the American group, due to the scarcity of subjects, included students who were not necessarily "majoring" in Japanese. The composition of each group is shown below.

Japanese monolinguals:	152 undergraduate students (71 males, 81 females) obtained from psychology classes at Aoyama Gakuin University in Tokyo
American monolinguals:	101 undergraduate students (38 males, 63 females) obtained from psychology classes at Boston University
Japanese majoring in English:	123 undergraduate students (35 males, 88 females) from Aoyama Gakuin University and International Christian University in Tokyo

Americans studying Japanese: 53 undergraduate and graduate students (37 males, 16 females) from Columbia, Georgetown, Harvard, Princeton and Seton Hall Universities

Japanese who had been to any English-speaking country and Americans who had been in Japan for more than a month were excluded from the samples. The plan to include a sample of bicultural coordinate bilinguals, fluent in both Japanese and English, had to be abandoned because of the difficulty in obtaining a sufficient number of subjects.

Visual stimuli. Four stick-figure cartoons were used as stimulus material. Each cartoon depicted the process of an interpersonal interaction situation in six frames on a sheet of 8½ x 11 inch paper. Originally it was planned to use films of short duration in which neutral objects, such as circles of different sizes, colors and shades, moved in various directions at different speeds, and another set of films showing two or three individuals interacting in a social or work situation. Both types of film had to be given up, the first because of technical difficulties, and the second because of the impossibility of making a culture-free film with real people in it. Stick-figures, devoid of details, seemed to be the solution to the problem of visual representation of people in action with a minimum of cultural bias.

All four cartoons show individual A getting into a situation with individual B (and C) which results in a negative outcome for A (See Appendix). These four cartoons, entitled Introduction, Bus, Cooking, and Dining, were selected from among 17 cartoons used in the pretesting. They were arranged in four different orders to control for the order effect, and were made into cartoon booklets.

Response measures. Responses to these cartoons were measured through a three-part questionnaire (See Appendix). Part I, which will be referred to as the questionnaire hereafter, consisted of nine questions per cartoon, precoded except for the first question, which was open-ended. The questions attempted to elicit quantifiable measures regarding the subject's perception and judgment of the interpersonal conflict situation.

Part II of the questionnaire was made up of pairs of sentences. There were four to seven pairs of sentences for each cartoon. The Japanese version served as the basis. Each pair of sentences described one aspect of the event in the cartoon, one in the active, the other in the passive. Subjects were asked to choose the sentence in each pair "that most appropriately describes the cartoon situation in question." The English version was translated from the Japanese version. The active sentences in Japanese were also active in English. The passive sentences in Japanese presented some problems in translation.[7] Those passive sentences that have transitive verbs in the passive, do not contain the extra noun phrase due to deletion of an identical noun phrase, and are therefore equivalent in surface structure to the English passive (e.g., Sentence (1) on p. 6) were translated into passive sentences in English. Adversative passive sentences with intransitive verbs (e.g., Sentences (2) on p. 6, and (11) on p. 19) were put in the active in English with the subject of the constituent sentence in the deep structure as the subject of the English sentence. Passive causative sentences were also put in the active with "had to" or in the passive with "was caused to" in the verb phrase. In other words, the meaning carried by the grammatical construction in the Japanese sentences was expressed lexically in English.

Part III was a brief personal information form, which included questions regarding residence abroad and language training.

Administration. Each subject received a packet consisting of three booklets: the cartoon booklet, the questionnaire, and the sentence booklet with the personal information sheet at the end. Subjects were instructed not to open the third booklet (sentence booklet) until they were finished with the questionnaire. After looking at each cartoon, subjects answered the nine questions on that cartoon while holding the cartoon booklet open. When they were finished with the first, they turned the page of the cartoon booklet, and went on to the next cartoon. Each subject went at his own pace. No two persons sitting next to each other received cartoon booklets (and hence the accompanying questionnaire) with the same order of presentation. When the subject had completed the questionnaire, he was asked to go on to the sentence booklet, which consisted of four pages, one page per cartoon. In responding to the sentences, the subject was allowed to refer freely to the relevant cartoon in the cartoon booklet. The reason the sentences were kept separate until the end was to prevent the subject, especially the Japanese, from becoming aware of the focus of the study.

The administration was done during regular classes with the writer serving as the experimenter in all but one case, in which about 15 subjects were involved.

---

[7] The Translation Study, reported in the preceding section, was to serve as the basis for solving problems of this type in the Perception Study. Unfortunately, the theoretical linguistic problems encountered in the Translation Study took up a great deal more time than we originally expected. Thus the Translation Study, instead of preceding the Perception Study, was conducted parallel to it.

Monolingual subjects responded to all parts in their native language. For the language majors only the sentence part was given in their second language. Hence, as far as the sentence part is concerned, English sentences were responded to by American monolinguals and Japanese majoring in English, while Japanese sentences were responded to by Japanese monolinguals and Americans studying Japanese. The Japanese sentences for the two groups, however, differed slightly in that the subject of the sentence was frequently omitted to make it sound more natural for the Japanese monolinguals, while omission of the subject may have confused Americans not familiar with colloguial Japanese. Inclusion of the subject for the Japanese monolinguals, on the other hand, may have induced these subjects to interpret the passive sentences as translation style passives. This would have counteracted the operation of the cognitive framework we were interested in measuring. Hence, we had no choice but to use two versions of the sentences in Japanese.

Analysis and Findings

The data were analyzed in a number of ways. Scalable data, that is answers to Questions 3 through 9 in the questionnaire, were analyzed by four-way unweighted means analysis of variance with repeated measures (Winer, 1962). The four factors were as follows: A, country: Japan and U. S.; B, language familiarity: monolinguals and language majors; C, sex: males and females; and D, cartoon: Introduction, Bus, Cooking, and Dining. Individual comparisons using the *t* test were made after the analysis of variance. Unscalable data, such as answers to Question 2 and the sentences, were analyzed by chi square.

The Questionnaire. The first hypothesis states that Japanese will tend to attribute responsibility to alter, or the other person, more than comparable groups of Americans will. The most relevant question in the questionnaire is Question 7, regarding responsibility, given below.

7. Regarding responsibility for the final outcome,

Only A was responsible.............................. 1
A was much more responsible than B.................. 2
A was somewhat more responsible than B.............. 3
A and B were equally responsible.................... 4
B was somewhat more responsible than A.............. 5
B was much more responsible than A.................. 6
Only B was responsible.............................. 7

Results of analysis of variance, shown in Table 5, indicate that country as a main effect was significant far beyond the .001 level. The difference was in the expected direction, with Japan having a mean of 3.17 and U. S. a mean of 2.47 (Table 6). Besides country, however, cartoon and sex were also significant sources of variance, and there was a significant interaction between country and cartoon. The significant interaction between country and cartoon appears to result mainly from Americans, both males and females, reacting more negatively to individual B in cartoon Introduction than in any other cartoon (See Table 28 in the Appendix). The difference between Japan and the U. S. was consistently significant for all the other cartoons and for all cartoons combined. This was true whether each nationality group was taken as a whole, or subdivided by sex or by language familiarity (monolinguals and language majors) or by both language familiarity and sex (See Tables 27 and 28 in the Appendix).

Insert Table 5 about here

The hypothesis that Japanese will tend to attribute responsibility to alter more than comparable groups of Americans will was thus supported. It should be noted, however, that "more" means "more than Americans will" and not "more responsibility to B than to A." The means for various Japanese cells ranged from 2.65 to 3.67, and the grand mean based on an N of 273 was 3.17. Hence, the Japanese also held A or ego more responsible than B or alter, but compared with Americans, they tended to attribute significantly greater responsibility to B.

Question B on causality is also related to the hypothesis.

8. If we consider "cause" to mean "that which brought about the final outcome,"

Only A was the cause..................................	1
A was much more the cause than B....................	2
A was somewhat more the cause than B................	3
A and B were equally the cause.......................	4
B was somewhat more the cause than A................	5
B was much more the cause than A....................	6
Only B was the cause..................................	7

Table 5. Analysis of Variance of Question 7 on Responsibility

Source	df	Mean Square	F
A (Country)	1	110.7957	33.9107***
B (Language)	1	0.5797	0.1774
C (Sex)	1	21.1723	6.4801*
A x B	1	1.0896	0.3335
A x C	1	7.5448	2.3092
B x C	1	15.6706	4.7962
A x B x C	1	2.7613	0.8451
Error (bw)	418	3.2673	
D (Cartoon)	3	30.7230	19.3917***
A x D	3	15.3527	9.6903***
B x D	3	0.5213	0.3290
C x D	3	1.1758	0.7421
A x B x D	3	2.9075	1.8352
A x C x D	3	0.7905	0.4990
B x C x D	3	0.8722	0.5505
A x B x C x D	3	1.6705	1.0544
Error (w)	1254	1.5843	

* $p < .05$
** $p < .01$
*** $p < .001$

Although the question appears to be a repetition of the previous one, the results in Table 6 suggest that the subjects distinguished between responsibility and causality.[8] Country as a main effect was not found to be significant in the analysis of variance. However, significant differences were found between the two countries in a number of individual comparisons (Table 8 of this chapter and Table 29 in the Appendix). In general, it was found that Japanese attributed causality to alter more than Americans did. The consistent difference between the means of Question 7 and Question 8 among American groups, with the mean for Question 8 on causality always higher than that for Question 7 on responsibility, suggests that Americans did not hold alter as much responsible as they perceived him to be the cause of the outcome. In other words, even when they perceived alter to be the cause of the negative outcome, they did not hold him responsible to the same extent. The Japanese samples do not show such a consistent relationship between the two answers.

Insert Table 6 about here

Question 2 attempted to find what is perceived to be the cause.

2. What is A thinking about in the last panel? Choose one of the following and circle the letter to the right of the sentence.

This would not have happened

if only we didn't have a get-together................ a
if only B and C didn't start drinking after dinner.... b
if only B and C had better sense...................... c
if only I had the courage to explain that I couldn't hold liquor.............................. d
if only I were more careful in driving................ e

The five alternatives were particular to the cartoon situations. The content of categories, however, was not. The choice of a particular alternative implied blaming in case of (a) fate or luck, (b) the combination of B (alter) and fate, (c) B (alter)'s lack of consideration, (d) one's own weakness in not explaining or asking, and (e) one's carelessness or lack of ability relating to the particular task or situation.

---

[8] It should be mentioned here that the causative *-(s)ase-* is not referred to as "the causative," but as "the auxiliary verb of *sieki*," *sieki* meaning "to use or employ (human or animal) for service."

Table 6. Japan - U. S. Comparison: Results of Analysis of Variance, Means and Standard Deviations

Question		A. of V. Signif. F[1]		Mean		S. D.	
				Japan N=273	U. S. N=153	Japan	U. S.
3.[2]	Feeling	C	8.62**	2.32	2.37	.71	.81
		D	20.95***				
		AD	5.36**				
4.	Willing	A	29.98***	4.22	3.44	2.06	1.94
		C	12.14***				
		D	84.22***				
		AD	24.72***				
5.	Choose?	D	81.97***	3.70	3.55	2.05	2.21
		AD	3.83*				
6.	"No"	C	4.73*	2.21	2.08	1.10	1.12
		ABC	6.74**				
		D	41.29***				
		AD	6.43***				
7.	Respons.	A	33.91***	3.17	2.47	1.44	1.46
		C	6.48*				
		D	19.39***				
		AD	9.69***				
8.	Causal.	AD	6.85***	3.21	2.90	1.64	1.50
		BCD	4.90**				
9.	Status	A	22.95***	2.28	2.09	.54	.65
		D	8.66***				

* $p < .05$
** $p < .01$
*** $p < .001$

1.

A	Country	(df = 1 and 418)
B	Language familiarity	(df = 1 and 418)
C	Sex	(df = 1 and 418)
D	Cartoon	(df = 3 and 1254)

2. Question 3 was scored in the opposite direction, hence the lower the score, the more negative the feeling.

The distribution by percentage for all cartoons combined is shown in Table 35 in the Appendix. In our analysis, however, categories (a), (b), and (c) were combined as representing "blaming factors outside onself," and (d) and (e) as "blaming oneself" for the negative outcome. The findings by chi-square are given in Table 7. As predicted, Japanese tended to blame factors outside oneself by choosing alternatives (a), (b), and (c), as opposed to (d) and (e) significantly more than Americans did in cartoons Introduction ($p < .05$), Cooking ($p < .01$) and Dining ($p < .001$). Cartoon Bus, for some reason, produced a significant difference ($p < .05$) in the opposite direction. While not significant, the same trend is seen for this cartoon in responses to Question 4 on A's willingness to talk and Question 5 on whether A chose to act the way he did. (See Table 8 of this chapter and Table 29 in the Appendix.)

Insert Table 7 about here

The remaining questions are related to the perception of interpersonal events and assignment of responsibility in the following ways. Given an interpersonal event in which individual B interacts with A, and the outcome turns out to be negative for A because he let B act on him, or dominate him, a Japanese is likely to perceive the influential B as a person of higher status than A (Question 9). B being of higher status, A accepts B's influence reluctantly (Questions 4 and 5), finds it difficult to go against B (Question 6) and then resents B at the end (Question 3). Except for Question 3, which is scaled in the opposite direction so that low scores represent more negative feelings, high scores mean negative responses, or responses expected of the Japanese based on the hypothesis. While obtained mean scores are given in Table 6 and 8, a chart for quick inspection of the direction and level of significance for the differences between Japanese and corresponding samples of Americans is given in Table 9.

Insert Tables 8 and 9 about here

The questions that show the greatest consistency in Japan - U. S. difference are Question 7 on responsibility and Question 9 on status. It is interesting to note that these questions tap aspects of interpersonal relations that have linguistic correlates, while the remaining questions deal with aspects that lack reinforcement from the language. The relevance of Question 7 to the passive construction has already been mentioned. Status, while it has not been mentioned so far in this study, is known to be an important feature in Japanese. It probably is the most salient feature in interpersonal perception and interaction. The status relationship between the speaker and addressee, as well as the speaker and any third person he makes reference to in his conversation, determines

Table 7. Japan - U. S. Comparison: Chi Square Analysis of Question 2

Cartoon		Frequency Blames others (a, b, c)	Frequency Blames self (d, e)	Chi Square
Introduction	J	141	128	
	US	61	89	5.32*
Bus	J	64	205	
	US	50	103	3.90* (-)
Cooking	J	135	137	
	US	55	99	7.71**
Dining	J	140	133	
	US	49	103	14.34***

* p < .05
** p < .01
*** p < .001

Table 8. Japan - U. S. Comparison by Sex and Cartoon

Question		Male Mean			Female Mean		
	Cartoon	Japan N=104	U. S. N=74	t	Japan N=169	U. S. N=79	t
3.[1]	Feeling						
	Intro.	2.54	2.27	2.11*	2.23	2.11	1.22
	Bus	2.66	2.70	- .31	2.43	2.54	-1.04
	Cook.	2.20	2.52	-2.95**	2.23	2.46	-2.20*
	Dining	2.22	2.22	.02	2.16	2.14	.25
4.	Willing						
	Intro.	4.43	3.83	2.02*	5.43	4.05	6.22***
	Bus	2.57	2.80	- .97	2.69	2.80	- .42
	Cook.	3.24	3.20	.13	4.04	3.58	1.71
	Dining	5.13	3.79	5.21***	5.64	3.47	9.02***
5.	Choose?						
	Intro.	4.18	3.82	1.20	4.66	4.57	.38
	Bus	2.55	2.61	- .20	2.20	2.59	-1.43
	Cook.	3.13	3.30	- .53	3.54	3.44	.37
	Dining	4.27	4.17	.38	4.79	3.87	3.43***
6.	"No"						
	Intro.	2.41	2.41	- .05	2.68	2.46	1.51
	Bus	1.92	1.56	2.12*	2.14	1.65	3.62***
	Cook.	1.85	1.85	- .03	2.04	1.80	1.72
	Dining	2.08	2.43	-2.29*	2.35	2.48	- .94
7.	Respons.						
	Intro.	2.96	3.05	- .37	3.27	3.08	.99
	Bus	2.64	2.08	2.71**	3.30	2.25	5.50***
	Cook.	2.81	2.12	3.07**	3.01	2.15	4.37***
	Dining	3.34	2.61	3.69***	3.67	2.41	7.26***
8.	Causal.						
	Intro.	2.89	3.17	-1.16	3.28	3.25	.11
	Bus	2.94	2.81	.56	3.38	2.76	3.04**
	Cook.	3.17	2.80	1.49	3.13	2.82	1.28
	Dining	3.27	2.79	2.20*	3.40	2.80	2.80**
9.	Status						
	Intro.	2.30	2.23	.79	2.41	2.22	2.17*
	Bus	2.32	2.16	1.66	2.30	2.04	3.19**
	Cook.	2.20	2.00	2.57*	2.31	2.01	3.70***
	Dining	2.07	1.99	.97	2.24	2.05	2.83**

*	$p < .05$
**	$p < .01$
***	$p < .001$

[1] Question 3 was scored in the opposite direction, hence a negative t means that the difference between Japan and the U. S. was in the expected direction.

Table 9. Direction and Significance Level of Differences between Japan and U. S.: All Cartoons Combined

Question	Grand Mean	Language Familiarity		Sex	
		Mono.	Lang. Maj.	Male	Female
	J US	J US	J US	J US	J US
3. Feeling	>[1]	>	>	>	>
4. Willing	> ***	> ***	> ***	> **	> ***
5. Choose?	>	>	>	>	>
6. "No"	>	> **	>	=	> **
7. Respons.	> ***	> ***	> ***	> ***	> ***
8. Causal.	>	> *	> ***	>	> ***
9. Status	> ***	> ***	> ***	> **	> ***

*	$p < .05$
**	$p < .01$
***	$p < .001$

[1] "J > US" means that Japanese scored more negatively than Americans, and thus the Japan - U. S. difference is in the predicted direction.

not only the choice of pronouns, but also the choice of verbs, grammatical constructions (see the section on "Open-ended Question" in the next chapter), style and the use of honorifics, and hence it is all-pervasive. Thus Questions 7 and 9 deal with aspects of interpersonal perception that receive support from the language, while the other questions deal with aspects that are socio-culturally induced. It is exactly for the two questions which have linguistic support that we find the greatest and most consistent differences between the Japanese and American samples.

On the basis of the findings shown in these tables, we may conclude that the Japanese perceived individual B as having a higher status (Q9), as being more responsible for the outcome (Q8), and individual A as having been less willing to get into the situation (Q4) than Americans did, all these differences being significant at the .001 level. There were also tendencies for Japanese to perceive A as not necessarily having chosen to act the way he did (Q5), as finding it more difficult to say "No" to B (Q6), and as feeling more negative to B after the outcome (Q3) than Americans. These differences were significant for only some of the cells. Country as a main effect was not significant in analysis of variance of these questions. Japanese also tended to attribute causality to B to a greater extent than Americans did (Q8), although significant differences were limited to certain cells.

The tables also show that cartoon is a major source of variance, more frequently than country. Except for Question 9 on causality, a significant interaction between country and cartoon is found for every question. Significant differences in the opposite direction were found only to Question 3 (A's feeling towards B) in Introduction, and to Question 6 (How difficult to say "No") in Dining. These social situations may have greater cultural factors working in them. For instance, it is fairly well accepted in Japan, where arranged marriage is still practiced, for a colleague or employer to introduce to his friend or employee a girl who he thinks is well matched. This may not be accepted as well by Americans. On the other hand, refusing to drink may be considered as going against social expectation more by Americans than by Japanese. Despite these variations in responses to different cartoons, however, when responses to all cartoons are combined, the Japanese consistently came out more negatively; that is, the Japanese consistently showed greater reluctance to get into the situation and to react more negatively toward alter than Americans did. This trend was also seen in the pretesting in which a greater variety of cartoons were used. (See the section on "Japan-Hawaii comparison in pretesting" in the next chapter.)

Another major source of variance was sex. The F for sex was significant at various levels in the analysis of variance of Questions 3, 4, 6, and 7 (Table 6). Japan seems to be the major contributor to this, for sex difference in Japan was significant for all the questions, women always tending to be more negative (higher scores for all the questions except Question 3, which was scored in the opposite direction). Within the Japanese samples, significant differences at above the .05 level were found between men and women in 29 out of 49 individual comparisons. None of the three differences found in the opposite direction were significant. While sex differences in the U. S. tended to be in the same direction, few were significant. Only 5 of the 49 comparisons showed significant differences. Four of these five were found between men and women in the language-major group. American women studying Japanese tended to be more like Japanese, while men studying Japanese tended to be farther removed from the Japanese in their responses than are monolingual American men. (See Table 30, Appendix.) What accounts for this sex difference among Americans studying Japanese in this sample is hard to discern. The consistent sex difference found among the Japanese, however, can be explained in terms of status difference between the sexes, and is discussed in greater length in the section of the next chapter on "Birth order."

Because Japanese women tended to be significantly more negative in their responses than men, while American women were only slightly so, differences between the two countries tended to be more significant when women of the two countries were compared. The two significant differences in the opposite direction mentioned previously, namely A's feeling toward B in cartoon Introduction, and degree of difficulty in saying "No" in Dining were primarily due to men. Both of these were significant between Japanese men and American men, but not significant between Japanese women and American women, although the differences were in the same direction (Table 10). Here again, we see women tending to score towards the negative end as compared with men.

Insert Table 10 about here

To summarize the findings based on the questionnaire, the hypothesis that Japanese tend to attribute responsibility to alter to a greater extent than Americans do was supported at the .001 level of significance. Responses to related questions also tended to support the hypothesis, although a number of exceptions were found in various cartoons. Sex and cartoon were found to be significant sources of variance more frequently than country. Women in general tended to be more negative toward alter than men. This sex difference was consistently significant in Japan.

The Sentences. Responses to the pairs of sentences were analyzed first by chi square and later by correlations.

English sentences were responded to by monolingual American students, and Japanese students majoring in English. Hypothesis IIb predicted that foreign language majors will show a carry-over of the cognitive framework from their first language even when they respond in their second language. More specifically, it was hypothesized that Japanese majoring in English would choose passive sentences, including the translation equivalent of the Japanese passive, in the English pairs significantly more frequently than American monolinguals would, while Americans studying Japanese would choose the active sentences in the Japanese pairs significantly

Table 10. Japan - U. S. Comparison by Sex

Question	Male Mean Japan N=104	Male Mean U. S. N=74	t	Female Mean Japan N=169	Female Mean U. S. N=79	t
3.[1] Feeling	2.41	2.43	- .36	2.27	2.31	- .98
4. Willing	3.84	3.40	2.85**	4.45	3.48	7.23***
5. Choose?	3.53	3.48	.36	3.80	3.62	1.24
6. "No"	2.06	2.06	- .02	2.30	2.09	2.73**
7. Respons.	2.94	2.47	4.21***	3.31	2.47	8.66***
8. Causal.	3.07	2.89	1.41	3.30	2.91	3.63***
9. Status	2.22	2.10	2.95**	2.32	2.08	5.76***

* $p < .05$
** $p < .01$
*** $p < .001$

[1] Question 3 was scored in the opposite direction, hence a negative t means that the difference between Japan and the U. S. was in the expected direction.

more frequently than Japanese monolinguals would. Only the first half of the hypothesis was supported. Of the 17 pairs of sentences in English (the last pair in Dining was omitted because the Japanese version had to do with transitive vs. intransitive verb, rather than active vs. passive), 13 showed significant differences in the expected direction between Japanese and Americans, 11 of the 13 at the .001 level (Table 11). The chi squares for these were computed with adjustment to equalize sex, since greater and more significant differences were found among women. Hence this adjustment had the effect of making the differences between the two countries smaller than otherwise.

Insert Table 11 about here

Results of the Japanese sentences were extremely puzzling. Of the 20 comparisons made by chi square with sex equalized, only two were significant ($p < .01$) in the expected direction, and three were significant in the opposite direction (Table 31 in the Appendix). There are several possible reasons for this, and most likely it is the combination of all these possible factors working against the predicted difference. One is that the choice between the two sentences within a pair may not have been based on the active-passive dimension alone for the Japanese subjects. The passive causative sentences were given in the lengthy form without applying an optional morphophonemic deletion rule that makes the verb phrase sound less awkward, and easier to pronounce, but sometimes makes it ambiguous in structure. Thus some passive causative sentences in the test sounded rather awkward. Findings from an awkwardness scale administered to 26 students from Japan at the University of Hawaii seem to partially support this hypothesis. Each passive sentence was rated in awkwardness in relation to the active sentence, with a score of 1.00 as most awkward, and 5.00 as the least awkward or most natural. The two passive sentences with the lowest scores were two of the three that had significant chi squares in the opposite direction. It is likely that Japanese rejected the passive because they felt the sentence did not sound right, while the Americans consciously chose the passive based on their knowledge of Japanese grammar. Similarly, three of the four rated most natural had chi squares significant in the expected direction either for both sexes or just for women. Sentences falling in the intermediate range of the awkwardness scale did not show any consistent pattern towards acceptance or rejection in the choice of the passive. However, the fact that the extreme cases did coincide with acceptance or rejection suggests that dimensions other than the active-passive contrast were considered by the Japanese subjects in making the choice.

Another factor, which is important from the point of view of teaching a second language, is that Americans learning Japanese are told that the Japanese passive is different from the English passive. Most English texts of Japanese do mention this (Bloch, 1946; Dunn & Yanada, 1958; Elisséeff, Reischauer & Yoshihashi, 1944; Jorden, 1963; Martin, 1964).

Table 11. Chi Square Analysis of English Sentences

Cartoon Sentence	Male f		χ^2	Female f		χ^2	Sexes Combined χ^2
	J	US		J	US		
Introduction							
1. B encouraged A to meet C	16	25		30	48		
A was encouraged by B to meet C	19	13	2.98	55	15	24.28***	23.54***
3. B introduced A	13	24		28	39		
A was introduced by B	22	14	4.93*	57	24	12.25***	16.09***
5. A met C	11	15		24	39		
A was forced to meet C	24	23	.51	60	24	61.33***	12.04***
6. A took C out on a date	21	23		45	45		
A was forced to take C out on a date	14	15	.00	40	18	5.19*	3.23
7. A found C boring	23	21		54	42		
A was bored by C	11	17	1.16	30	21	.09	.18
Bus							
1. B approached A	25	24		58	40		
A was approached by B	10	14	.56	27	20	.04	.33
2. A talked too long	21	29		35	52		
B talked too long	14	8	2.86	50	10	27.05***	26.63***
3. A talked with B	26	29		56	57		
A had to talk with B	9	9	.04	29	5	13.69***	8.86***
4. A missed the bus	27	33		57	59		
A was made to miss the bus	8	5	1.17	28	3	17.01***	15.72***

(Continued on next page)

Table 11: Continued

Cartoon Sentence	Male f J	Male f US	Male χ^2	Female f J	Female f US	Female χ^2	Sexes Combined χ^2
Cooking							
1. B called up A	17	27		49	42		
A received a call from B	18	11		36	21		
			3.85*			1.24	3.79
2. A talked too long	16	25		19	46		
B talked too long	18	12		66	17		
			3.05			37.71***	34.59***
3. A talked with B	19	27		36	46		
A had to talk with B	16	11		49	17		
			2.20			13.77***	14.60***
4. A burned the pot	23	26		41	46		
A was caused to burn the pot	12	12		44	17		
			.06			9.17**	6.93**
5. A burned the pot	25	28		46	55		
B caused the pot to burn	10	9		39	8		
			.17			18.38***	13.82***
Dining							
1. They invited A	15	25		34	47		
A was invited by them	20	13		51	16		
			3.87*			17.49***	19.01***
2. They encouraged A to drink	23	27		30	41		
A was encouraged to drink by them	12	11		55	22		
			.24			12.36***	10.98***
4. A drank	14	27		31	52		
A was made to drink	21	11		54	11		
			7.14**			31.18***	34.34***

* $p < .05$
** $p < .01$
*** $p < .001$

Thus, to Americans the peculiar characteristics of the adversative passive are conscious knowledge, while to the native speakers of Japanese it remains unconscious. The contrast between the English passive and the Japanese passive cannot be taught to students, nor by teachers (Japanese teachers of English) who are not even aware of the fact that Japanese has the adversative passive besides the translation style passive that is constantly used in English-to-Japanese translation. Hence, the Americans responding to Japanese sentences may be assumed to have consciously applied what they had learned, while Japanese responding to English sentences most likely have responded unconsciously in terms of their cognitive framework. If this interpretation is correct, Carroll and Casagrande's (1958) conclusion that education can modify whatever influences language may have is supported.

For the correlational analysis, the passive sentences were classified into two types. Subjects' scores on responsibility (Question 7) were correlated with the number of passive sentences chosen from each type of passive as well as with the total number of passive sentences chosen.

The Japanese sentences were classified into passive causative and adversative passive sentences. Four pairs were omitted from the correlational analysis because the sentences in these pairs were contrasted on slightly different grounds than active vs. passive. (The contrast was between passive vs. gerundive construction, which is discussed in the section on "Content analysis: open-ended question" in the next chapter. The total number of passive sentences used in the correlational analysis was 17 with eight passive causative and nine adversative passive sentences. The detailed classifications are given in Table 12.

Insert Table 12 about here

The English sentences were classified into "pure passive," such as "A was approached by B," "A was invited by them," and "semantic passive," which included the translation equivalents of all the passive causative sentences and some of the adversative passive sentences. Two items from Cooking were omitted because they could not be classified in either of the two categories. (See Table 12.)

The resulting correlations are given in Table 13. It is interesting to compare these correlations with the frequency distribution for the chi square analysis (Table 11, and Table 31 in the Appendix). Table 11 shows that the difference between Japanese and American males is significant in only four out of 15 pairs of sentences used in the correlation study, although there is a tendency for Japanese men to choose the passive more frequently than American men in general. Japanese women, on the other hand, are significantly different from American women in their choice of the passive in 13 out of the 15 pairs. Yet the correlation between the responsibility score and the total number of passive sentences chosen is

Table 12 (a & b). Sentence Classification Used in Correlational Analysis

a. Japanese Sentences

Cartoon	Item Number			
	Passive Causative	Adversative Passive	Total Passive Used	Omitted
Introduction	5, 6, 7	1, 3	1, 3, 5, 6, 7	1, 3
Bus	3, 4	1, 2	1, 2, 3, 4	--
Cooking	3, 4	1, 2, 5	1, 2, 3, 4, 5	--
Dining	4	1, 2	1, 2, 4	3, 5
Total No. of Items	8	9	17	

b. English Sentences

Cartoon	Semantic Passive	Pure Passive	Total Passive Used	Omitted
Introduction	5, 6, 7	1, 3	1, 3, 5, 6, 7	--
Bus	2, 3, 4	1	1, 2, 3, 4	--
Cooking	2, 3, 4	--	2, 3, 4	1, 5
Dining	4	1, 2	1, 2, 4	5
Total No. of Items	10	5	15	

significant for Japanese men as well as American men, but not for Japanese women. The coefficients of correlation were .47, .36 and .19 respectively (Table 13b). What this suggests is that in cases of both Japanese and American men, who did not choose the passive as overwhelmingly as the Japanese women did, the choice was related to personality or individual characteristics. Their perception and judgment of responsibility are reflected in their choices of sentences. Their choices are more discriminatory than those of Japanese women. In the case of the latter, the pervasive choice of the passive is less discriminatory, therefore less a reflection of their personality, and thus the correlation is lower. What was said about Japanese and American men probably applies more strongly to American women, who tended to choose the passive even less frequently than American men. The correlation coefficients between the responsibility score and the total number of passives is .54 for American women. High correlations then seem to be found when the selection is made discriminatingly, possibly according to one's conscious beliefs. When the majority behave in a similar manner, we would expect a low correlation due to the narrow range of dispersion.

Insert Table 13 about here

The correlations between the question on Responsibility and the Japanese sentences need to be studied in relation to the chi square analysis also. When we look at Table 31 in the Appendix, we do not find a pervasive trend on the part of either Japanese or Americans to choose the passive. However, those Japanese who chose the passive even when the passive sentence sounded rather awkward probably did so because they strongly felt the passive to be more appropriate. At least, the Japanese women were more selective with the Japanese sentences than with the English. This may explain why the correlation between the responsibility score and the total passive for Japanese women is considerably higher with the Japanese sentences than with the English. The extremely high correlations found among American women studying Japanese are rather interesting. It was pointed out earlier that four of the five significant sex differences found within the American group were found among language majors, and that women in this group resembled the Japanese in their responses. There was a possibility that the consistently higher mean scores obtained by this small group of 15 (as compared with the other three American subgroups) on most of the questionnaire were due to the extreme scores of a few. To check such a possibility, the standard deviations for all seven questions in the questionnaire were examined. The group of American females studying Japanese turned out to have the largest standard deviations among the eight subgroups being considered here (country, language and sex: 2 x 2 x 2) in four of the seven questions, and the second largest in one. Hence it may be reasonable to assume that this small group of American women studying Japanese is a rather heterogeneous group. This then would explain the high correlations obtained by this group of individuals.

Table 13 (a & b). Correlations of Responsibility Score to Causality Score and Choice of Passive Sentences

a. Japanese Sentences

Group	Sex	N	Causal.	Pass. Caus.	Advers. Pass.	Total Pass.
Jap. Monolingual	M	65	.31**	.30*	.28**	.39**
" "	F	76	.64**	.48**	.27*	.47*
U. S. Lang. Major	M	33	.46**	.19	.26	.26
" " "	F	15	.80**	.81**	.31	.67**

* p < .05
** p < .01

b. English Sentences

Group	Sex	N	Causal.	Semant. Pass.	Pure Pass.	Total Pass.
Jap. Lang. Major	M	34	.48**	.44**	.27	.47**
" " "	F	84	.50**	.25**	-.05	.19
U. S. Monolingual	M	32	.56**	.43*	.05	.36**
" "	F	56	.58**	.55**	.27*	.54**
Hawaii "	F	20	.72**	.43	.39	.46*

* p < .05
** p < .01

Having examined the results for the sentences, we can now return to our second hypothesis. The hypothesis states that foreign language majors will show a carry-over of the cognitive framework from their first language even when they respond in their second language. The hypothesis was not fully supported. Japanese students majoring in English did show a significant tendency to choose the passive, or the semantic equivalent of the adversative, over the active as a descriptive statement of an adversative event. However, we cannot assert that this is a carry-over of the cognitive framework from their first language because the monolingual Japanese did not show the same trend in responding to the sentences in Japanese. Similarly, Americans studying Japanese chose the passive over the active in Japanese much more frequently than their monolingual counterparts did in English.

One could question the comparability of the monolingual and language-major groups within each nationality. Language familiarity, however, was not significant as a main effect, nor in interaction with another factor, but only in triple interaction with two other factors in two of the seven questions in the questionnaire (Factor B in Table 6). Of the 49 individual comparisons made between monolingual Japanese and Japanese students majoring in English, seven were significant. Four of these seven significant differences were on Question 9 (Status). Interestingly, the Engligh majors were consistently farther removed from the Americans (had higher means) than were the monolinguals in these comparisons. The two groups of Americans, that is monolinguals and those studying Japanese, differed significantly in four of the 49 individual comparisons. American men studying Japanese had significantly lower means than monolingual American men in two cases, while American women studying Japanese had significantly higher means (thus were more like Japanese) than monolingual American women did in two cases. Because the men and the women studying Japanese differed in the opposite direction from their monolingual counterparts, when the group of Americans studying Japanese was taken as a whole, no significant difference was found between this group and the group of monolingual Americans.

The differences, discussed above, between language majors and monolinguals within each nationality group, appear to be too sporadic to account for the differences in the percentage of passive sentences chosen as shown in Table 14. If we assume the two subgroups within each nationality to be comparable, the explanations given previously seem to be most reasonable. Comments made by some of the subjects after the experiment tend to support these explanations. At an informal discussion at one of the universities where Americans studying Japanese were tested, a number of subjects commented that the sentence part of the experiment was unpleasant because of the conflict they experienced. One said, "I knew that in Japanese one is supposed to express the event in the passive, but as an American, I couldn't." There were others who decided to choose the passive because they were "responding in Japanese." One female subject, who was not included in the sample because of several years' residence in Japan, said, "When I use the Japanese language, I think Japanese, feel Japanese and behave like a Japanese. I am a completely different person."

These comments tend to corroborate our interpretation that American language majors consciously chose the passive in Japanese based on their knowledge of Japanese.

Insert Table 14 about here

As for the Japanese subjects responding to English sentences, revealing comments of this type were not made nor could they be expected, since most of the subjects are not even aware of the adversative meaning in the Japanese passive, not to speak of the difference between the English and Japanese passive. However, we have an interesting comment from one of our Japanese research assistants on the project. She had been in this country for only a year at the time. She said that she could not help feel that the English passive also had an adversative meaning. If someone said, "I was met at the airport by so-and-so," she would automatically interpret that the speaker resented so-and-so's meeting him at the airport. Even though she knew the English passive to be different, she said she could not overcome her resistance against expressing anything positive in the passive, whether in Japanese or English. It is likely that such a framework was operating at an unconscious level among the Japanese subjects who responded to the English sentences.

Why is it then that the monolingual Japanese subjects chose fewer passive sentences in Japanese than the English majors did in English? Besides the explanation based on awkwardness in relation to the morphophonemics given earlier, two other factors may have affected the responses of the subjects. One is the desire to be consistent. It is quite possible that the contrastive pair of sentences in the active and passive made the subjects aware, for the first time, of the adversative meaning contained in the passive. If so, they may have consciously chosen those sentences that were consistent with their responses in the questionnaire. It was exactly because of this possibility that the sentences were administered after responses to all the four cartoons in the questionnaire had been given. The other factor is the atmosphere of "objectivity" that tends to prevail in any classroom situation. The scaled, precoded questions, in addition, is likely to have encouraged the subject to take an objective attitude in responding. We would expect the difference between Japanese and Americans to be greater if such factors towards objectivity were not working. In the previous section it was mentioned that in colloquial Japanese, most of the passive sentences are in the adversative. While a Japanese is likely to express his feelings through the adversative in conversation with his family and friends, he is less likely to do so in writing, especially in an objective setting. In our Translation Study, it was found that in conversation 78 percent of the occurrences of passives are adversative, and only 1.3 percent translation style passive. This ratio probably will be reversed in textbooks on most academic subjects, as well as in the writings of students on any

Table 14. Percentage of Passive Sentences Chosen in First and Second Languages

Group	Sex	First Language %	Second Language %
Japan		Japanese	English
	M	39.62	43.89
	F	46.13	54.60
U. S.		English	Japanese
	M	33.10	41.92
	F	25.56	37.04

scientific topic. Thus, the experimental setup, which took place in a psychology class, is likely to have minimized the operation of the cognitive framework regarding the adversative passive.

To summarize the findings on the sentences, the hypothesis that there will be a carry-over of the cognitive framework from the first language to the second language was not fully supported. Both Japanese and Americans chose the passive or the passive equivalent more in their second language than in their first. Different reasons were given for the similar trends for the two groups. It was assumed that the Japanese would have chosen the passive to the same extent in Japanese, their first language, as in English, were it not for the experimental artifacts that may have prevented them from doing so. Thus their pattern of responses to the English sentences was interpreted to be a carry-over of the cognitive framework from Japanese. The Americans, on the other hand, were assumed to have counteracted their cognitive framework from their first language, namely the tendency to choose the active over the passive (Slobin, 1967) through the conscious application of what they had learned about the Japanese language.

V. ADDITIONAL ANALYSES AND COMPARISONS

The main body of the experiment has been presented in the previous chapter. However, to insure that factors other than the language variable were not responsible for the obtained differences between Japanese and Americans, additional analyses and comparisons were made. Cross-cultural comparisons based on additional samples are reported in the latter half of this chapter, all other analyses are given in the first half.

Additional Analyses

Presentation order analyses. The consecutive presentation of stimuli similar in nature was expected to have some effect on the responses of the subjects. It appeared likely that responses to the first cartoon in the series would be the most genuine and fresh, while repetition of the same questions to similar situations would tend to establish some sort of mental set resulting in responses showing a regression effect. There was also the alternative possibility of responses becoming more severe as repetition builds a cumulative effect. To check whether Japanese and Americans showed similar or dissimilar trends in responding to "repeated questions," the means and standard deviations for Question 7 (Responsibility) and Question 8 (Causality) were computed for each of the four cartoons in each of the four orders of presentation. Correlations between Questions 7 and 8 were also obtained. Nothing of significance that would affect the interpretation of data was found. The means are given in Table 32 in the Appendix. While some differences according to cartoons were found, there was a general trend to shift responsibility more towards ego or A with repetition. This trend was found among both Americans and Japanese. Responses to Question 8 on causality did not show such a consistent trend. The overall mean, that is the mean for all cartoons combined, is the lowest for the last cartoon in the series for both Americans and Japanese. Outside this, much fluctuation is seen. The most interesting consistent trend was in the response of Americans to the cartoon Introduction. When this particular cartoon was presented later in the series, Americans tended more frequently to perceive response B (alter) as the cause; when this cartoon was presented earlier in the series this was not observed. No such trend was found with any other cartoon by either the Japanese or the Americans. As is evident from previously presented data, Americans tended to respond more negatively to Introduction than to any other cartoon; and this cartoon apparently had a more irritable effect the greater the number of cartoons that preceded it. With the exception of Introduction, the greatest difference between Japanese and Americans was found in responses to the first cartoon in the series. Since we had an approximately equal number of subjects for each order of presentation, the Japanese-American comparisons were not affected in favor of our hypothesis.

Birth order analysis. In traditional Japan, the hierarchical structure of interpersonal relationships was observed in the family as well as outside the family. Younger siblings had lower status than elder siblings, daughters in general had lower status than sons. Among the sons, the first born had special rights and privileges as the heir to the family. In such a family, the younger sibling was apt to be subjected to frustrations expressable by the adversative passive or passive causative more frequently than the elder sibling. To test the hypothesis that younger siblings will tend to attribute responsibility to alter to a greater extent than first borns in Japan, but not in the U. S., additional analyses were carried out. Questions 7 (Responsibility) and 8 (Causality) were analyzed by four-way analysis of variance, the four factors being country: Japan vs. U. S.; birth order: first born vs. all others; sex: male vs. female; and cartoon: Introduction, Bus, Cooking, and Dining. Factors found to be significant were those we had already consistently found in other analyses, namely country, country and cartoon interaction for both questions, and cartoon as a main effect, and sex and country interaction for Question 7 (Responsibility). Birth order was not found to be a significant factor in the analysis of variance nor in any of the individual comparisons made. In the analysis of responses to the sentences by monolingual Japanese, however, five of the 22 chi squares were significant, and all five were in the expected direction. Younger siblings chose the passive over the active significantly more than first borns in all five cases. Except for the findings from the sentences, no consistent trend supporting the hypothesis was found. This is likely to be due to the fact that "discrimination by birth order" is no longer observed in urban middle class families.

The hypothesis on birth order, when restated at a more abstract level, finds support in the sex difference found earlier. The hypothesis essentially has to do with status, and at a more abstract level it would be stated as follows. Those who frequently find themselves being the lower status person in interpersonal relations would tend to attribute greater responsibility to alter than those who do not find themselves to be of lower status. Status is relative in that a teacher is higher in status than the parent of his pupil when the two individuals relate to each other in these roles, but the teacher is lower in status than the principal. However, since status is largely determined by age and sex when occupation, rank and socio-economic background are not known, the younger finds himself more frequently to be of lower status than the elder, and a woman finds herself most of the time lower in status in relation to a man. The hypothesis then predicts that women will tend to attribute responsibility to alter more than men will. This has been supported in previous analyses. (See Table 30, Appendix.) "Discrimination by birth order," even if practiced, would be practiced only at home within the family, and once the individual steps out of home it is age rather than birth order that determines his status in relation to another person of the same sex. Since one advances his status with age, neither age nor birth order is expected to have as pervasive an effect as sex on one's status relationship with other individuals. The consistent directional difference between the sexes for the Japanese sample in Table 30 (Appendix) is rather impressive. Sex equality appears to be still superficial in Japan, and the long tradition of male superiority seems to continue, even though somehow diluted in form in recent years.

Mode analysis: The Cognition Study. In the original plan, the Cognition Study was to be the third part of the project, linking the Translation Study to the Perception Study. It will be remembered that films were to be used as visual stimuli in place of cartoon in the perception experiment. The subjects' verbal reports of what they saw would have then been based on memory, while memory is not involved in translation. The Cognition Study was to investigate the effect of the cognitive framework when it is given the greatest opportunity to operate, namely in memory. Language-major subjects were to reproduce in their first language passages that were presented to them in their second language. Half the subjects, to be called "interpreters," would be given the passages aurally, and translate the passages from memory, while the other half, to be called the "translators," would be given the passages visually in written form. The original design also included a group of bicultural coordinate bilinguals, fluent in both Japanese and English, in the Perception as well as the Cognition experiment. The impracticability of obtaining such a group of subjects forced us to give up the idea of including them.[9] As it was, it was difficult enough to obtain a sufficient number of Americans studying Japanese for the Perception experiment.

As a result of these changes, hypotheses relating the responses of the "interpreters" to those of subjects who respond after seeing the film, or comparing the responses of bicultural coordinate bilinguals with those of language majors became untestable. With the additional elimination of Americans majoring in Japanese as a subsample for the Cognition Study, the significance of the Cognition Study in the total study was drastically reduced.

The Cognition Study was thus modified to a mode analysis in which the mode of stimulus presentation was compared. Using four sections of an English class at Tokyo Women's Christian College, two related experiments were carried out. One experiment was on translation. Two groups of students were asked to translate into Japanese passages presented to them in their second language, English. One group, the "interpreters," received the passages aurally, while the other group, the "translators," received them in written form. The passages presented were the stories of the four cartoons used in the Perception Study. Each story was given as a short paragraph, consisting of short sentences in the active voice. (See Appendix.) In the second experiment, the same passages were presented aurally to one group, in written form to the other, and subjects were asked to respond to the same questionnaire and sentences used in the Perception experiment.

---

[9] A group of supposedly coordinate bilingual subjects was obtained from a summer NDEA institute for pretesting. Half of the 20 subjects turned out to be unable to read or write Japanese, even though they were able to understand and speak it.

The hypothesis tested was that the cognitive framework will show a greater effect when the stimulus is presented aurally than when presented in written form. Restating the hypothesis for each of the two experiments, it was predicted that the style of writing of the "interpreters" would resemble that of the original authors of short stories in the Translation Study, while the style of the "translators" would be in translation style, resembling the style of writing of the translators of English short stories discussed in the third chapter of this report. For the groups responding to the questionnaire, it was predicted that the subjects receiving the stimuli aurally will tend to show more negative responses, that is responses more characteristic of the Japanese based on the cognitive framework, than subjects receiving the stimuli in written form.

Neither of these hypotheses were supported. The reproduced stories in Japanese were not different in style between the "interpreters" and "translators." There are several plausible reasons for behavior of the interpreters: (1) The subjects as English majors had been trained to translate accurately. Despite the instruction to translate into "natural sounding Japanese," they reproduced the stories in translation style Japanese by habit or Einstellung. (2) The fact that the regular English instructor served as the experimenter, which meant that the aurally presented passages were read by the class instructor, probably reinforced the subjects' Einstellung to translate the stories accurately by using the translation style. (3) The passages were too short, the sentences too clipped to leave any room for distortion by condensation. (4) There was no time interval between the aural presentation of each story in the second language and the reproduction of the story in the first language. If an irrelevant task had been given after the presentation of the story and before responding, some forgetting and distortion may have taken place. Most likely all these factors worked against the hypothesis.

The findings based on the responses to the questionnaire showed no significant differences between the aural presentation group and the written presentation group either. The lack of significant differences, or even consistent directional differences between the aural and written presentation groups is likely to be due to the same factors given above. The two groups were also compared with other female English majors in Japan who participated in the Perception Study. The results of two-way analysis of variance for all the scalable questions, and significant differences in individual comparisons are given in Table 33 of the Appendix. There were no consistent directional differences according to mode of stimulus presentation. In summary, no differential effects were found between aural presentation and written presentation of passages in the second language in either of the two experiments. The lack of difference was attributed to the weak design of the experiment and to the translation habit of the subjects.

Content analysis: The open-ended question. Question 1 in the questionnaire was an open-ended question asking the subject to give a brief account of "what brought about the outcome in the last panel" of the cartoon, with an emphasis on the interaction between A and B. Responses to this question were to be coded on the basis of codes developed in the Translation Study. However, as was mentioned earlier, the Translation Study turned out to be much more complicated than was originally envisaged, and instead of preceding the Perception Study, it had to be carried out along with the Perception Study. An attempt was made to develop codes for responses to Question 1 independent of the Translation Study. However, Question 1 being only a small part of the Perception Study, it was impractical to devote a disproportionate amount of time to developing codes just for this particular question. It should be mentioned here that developing codes for responses to this question required specific qualifications in the coder. The coder had to be (1) not only fluent in both Japanese and English, but (2) also familiar with all types of colloquial and slang expressions in both languages, and (3) able to read or decipher handwriting in both Japanese and English. These requirements would not have been necessary once the codes were developed, since a native from Japan could code the Japanese responses while an American could code the English responses. During the development of codes, however, the person engaging in the task of establishing equivalence of expressions in Japanese and English had to have these qualifications. Unfortunately, there were only two individuals on the project staff with these qualifications. The full time help of one was required in the Translation Study, while the other had to devote her time to supervising the project as a whole. After several unsatisfactory attempts at developing a simple coding system for responses to Question 1, content analysis of these responses was abandoned as impractical.

During these attempts, however, a number of discoveries were made. A construction that was found to be used frequently in describing subtle reactions to situations expressable in the adversative passive or passive causative was the -te simau construction. Simau itself is a verb meaning "to finish, to complete." Attached to the gerundive form of another verb at the end of the sentence, it gives the meaning of perfective, that is having completed the act expressed by the main verb, or the meaning of having engaged in an involuntary act expressed by the main verb. Sentences as follows were often found to describe the cartoon situations:

A wa basu o nigasite simatta.

(A ended up missing the bus.)

A wa ryoori o kogasite simatta.

(A ended up burning the food.)

The main difference between this construction and the adversative passive or the passive causative is that the connotation of having been victimized is lacking in the -te simau construction. It only connotes that the act was not intended, that it was involuntary, and possibly even admitting that the act was a mistake, but unlike the passive causative, the locus of responsibility is not shifted away from onself. However, it can be combined with the passive, or passive causative to produce sentences such as follows:

A wa sake o nomasarete simatta.

(A ended up being forced to drink.)

Another set of constructions was frequently found. These constructions are similar in structure to the above -*te simau* construction. They were the set of -*te morau*, -*te itadaku*, -*te kureru*, -*te kudasaru*, -*te yaru*, and -*te ageru*. The meanings of the verbs by themselves, and the meanings when attached to the gerundive form of another verb are given below.

1. morau
itadaku*) to receive
-te morau
-te itadaku*) to receive a favor from alter

2. kureru
kudasaru*) to give from alter to ego
-te kureru
-te kudasaru*) for alter to perform an act beneficial to ego

3. yaru
ageru*) to give from ego to alter
-te yaru
-te ageru*) for ego to perform an act beneficial to alter

This type of construction, analyzed as "gerund + auxiliary" by Martin[10], will hereafter be referred to as a gerundive construction for convenience of reference. There are only a limited number of verbs that can take the position of what Martin calls the auxiliary. The finite set of gerundive construction consists of -*te iru*, -*te aru*, -*te oku*, -*te miru*, -*te kuru*, -*te simau*, -*te morau*, -*te itadaku*, -*te kureru*, -*te kudasaru*, -*te yaru*, -*te ageru*, and possibly a handful of others. It is interesting to note that of this limited set, the last six, that is the three pairs given above, have to do with interpersonal interaction. The two members of each pair above are the same in meaning, but the one with the asterisk is the polite form. The two in each pair are used differentially depending on the relative status of alter to ego as well as on the relative status of the addressee to the speaker. The first pair is essentially passive in meaning. The second pair kureru and kudasaru is distinguished from the third pair yaru and ageru in terms of direction of "giving" from the focus. Examples of usage are given below in relation to one of the cartoons.

---

[10] Based on lecture notes from "Structure of Japanese," a course offered by Samuel Martin at the Linguistic Institute, University of Washington, Summer, 1962.

(a) B wa A ni onna no ko o syookai sita.
(B introduced a girl to A.)
Neutral statement

(b) B wa A ni onna no ko o syookai site yatta/ageta.
(B introduced a girl to A.)
B is the focus: B felt he was doing A a favor by introducing a girl to A.

(c) B wa A ni onna no ko o syookai site kureta/kudasatta.
(B introduced a girl to A.)
A is the focus: A felt B was doing him a favor by introducing a girl to him.

(d) A wa B ni onna no ko o syookai site moratta/itadaita.
(A had a girl introduced to him by B.)
Passive in meaning, the act is welcomed by the recipient

(e) A wa B ni onna no ko o syookai sareta.
(A had a girl introduced to him by B.)
Adversative passive, the act is unwelcome by the recipient

A neutral, matter-of-fact statement would be in the active, like (a) above. As an objective statement, it may sound a little too cold and harsh in conversation if the speaker is in any way identified or involved with the person being talked about. Hence constructions (b), (c), (d), and (e) are used very frequently in conversation and nonscientific writing, such as letters, diary, fiction, human interest reports, etc. (b) and (c) contrast only in terms of focus, while (d) and (e) differ only in terms of whether the act received was favorable to or welcomed by the recipient of the act. In the pretesting of this study, to be discussed in greater detail later in this chapter, some of the cartoons had positive endings. Thus the cartoon Introduction had a positive as well as a negative version. The positive version differed from the negative only in the last panel, where A and the girl are smiling instead of looking bored. It was interesting to find that gerundive constructions of types (c) and (d) were frequently used in the free style responses when the outcome was positive, but infrequently when the outcome was negative. In the latter case, the adversative passive, or the active sentence with an adverbial, such as "against A's will," was frequently used. Needless to say, the neutral active sentence was used by many whether the outcome was negative or positive. Items (2) and (4) in Introduction and (3) in Dining in the Japanese sentences had aversative passive sentences paired with sentences in the gerundive construction. Despite the negative outcome, varying proportions of subjects chose the sentences of the (c) or (d) type over the passive (Table 31 in the Appendix). In all cases, however, more subjects chose the passive over the other. Some subjects interpreted the cartoons slightly differently, such as "A having been a secret admirer of girl C, he was glad to be introduced to her, but things didn't turn out well on their first date." It may be subjects like this who chose the -te morau construction over the passive.

The three pairs of gerundive constructions given here are other examples of attitudinal formators discussed earlier (Chapter II). It is interesting to note that the Japanese language is rich in attitudinal formators of grammatical constructions. It thus appears that the adversative passive is only one case in a set of grammatical attitudinal formators expressing positive or negative feelings towards an interpersonal event. The positive-negative dimension in interpersonal interaction therefore must be a salinet semantic feature in the Japanese language. Nakamura, an authority on Eastern thought, supports what has been said by many scholars, namely that "the expressive forms of Japanese sentences put more emphasis upon emotive factors than cognitive factors" (Nakamura, 1960, p. 462). The Japanese is apt to express his attitude subtly through a particular grammatical construction. Thus, the following two English sentences,

John had a party held in his honor,

John had a lizard fall on his shoulder,

would have to be expressed in the active in Japanese to be neutral, with the agent of the action as the subject of the active sentence. If the above two sentences were to be put in Japanese with "John" as the subject of the sentence, they would have to be expressed with attitudinal formators. They would respectively become: "John received the favor of somebody holding a party in his honor" in the -te morau construction, and "John was adversely affected by (or subjected to) a lizard falling on his shoulder" in the adversative passive construction. In other words, depending on whether the act received was positive or negative to the recipient of the act, a different grammatical construction would have to be used.

In using these constructions in everyday life, the Japanese automatically makes a decision on the positive-negative dimension regarding the event he is to describe. This dimension then is a criterial attribute in the choice between active and passive sentences in traditional, that is colloquial, Japanese, and between the adversative passive and the -te morau construction when the object (recipient) of an action is to be the subject of the sentence. Another dimension salient in the semantic structure of the Japanese language is ego and ego related things vs. alter, exemplified in the contrast of (b) and (c) above. Intricately related to the ego vs. alter dimension is status relationship. The importance of status relationship in the Japanese language has been mentioned in the previous chapter (p. 40, 44). This is one dimension that is visible to native speakers as well as to those who learn Japanese as a foreign language. Children are corrected by parents and teachers when they fail to use or incorrectly use the honorific affixes, honorific words, or the polite style of language, since this would be a breach of etiquette. For instance, one is supposed to use honorifics in making reference to alter, if alter is of higher status or of equal status but not solidary, but one should never use honorifics in reference to ego or ego related things and persons. Thus in speaking to one's father, one would use honorifics since he is of higher status, but in talking about one's father to a friend, one would not use honorifics regarding the father since he is "ego related." Status relationship and the ego vs. alter dimension are related in this manner. Honorifics, or keigo, playing such an important role in the Japanese language, it is not surprising that the most significant psycholinguistic study done in Japan is on keigo. In this large scale study by the National Language Research Institute (Kokuritsu Kokugo Kenkyūjo, 1957), it was found among other things, that status relationship as it affects the use of keigo is determined by a rather complex set of variables. Holding other variables constant, the person who is psychologically in a weaker position is perceived as lower in status than a person in a psychologically stronger position.

These examples suggest that the three semantic dimensions pointed out are also related in a complex manner. The analysis of the open-ended question indicated that this study tapped only one half, the negative half, of one of the three dimensions that appear to be salient in the semantic features of Japanese, and suggested a wide area for future investigation.

Comparisons with Additional Samples

Language being a part of culture, the separation of language and culture is impossible, and, when forced, artificial. Yet one might argue that the difference found between Japanese and Americans in their perception of interpersonal events and attribution of responsibility is due more to other aspects of culture than language. The hierarchical social structure of Japan induces Japanese to perceive interpersonal relations in terms of this hierarchy. They feel they have not much choice in the situation, follow their superior and resent him afterwards. One of the outstanding characteristics of the Japanese as people of an authoritarian culture was found to be acquiescence (Niyekawa, 1966). The behavior of the Japanese found in our samples can very well be explained in terms of acquiescence. The question then is whether the Japanese would have responded in the same manner, or to the same extent, as a result of growing up and living in Japanese culture even if the language did not have these grammatical features on which this study was based. It was mentioned earlier that there appears to be a mutual reinforcement between the structure of Japanese society and the structure of the Japanese language. It seemed likely that without the influence of language, Japanese would not have responded as strongly as they did. In order to seek an approximate answer to this question, we obtained a sample of Americans of Japanese ancestry in Hawaii, and later a sample of Germans from Berlin.

Japanese-Americans from Hawaii. Hawaii is often called a melting pot of races, and a considerable portion of the population is mixed, but there are a number of distinct ethnic groups, Japanese being one of the major ones. Most of the Japanese religious and folk festivals are observed as important annual events of the Japanese community, and some of the old Japanese customs dying out in Japan are found to be better preserved among the Japanese in Hawaii. An individual born into such an ethnic community is thus exposed to strong Japanese cultural influences at home while he may grow up as a monolingual English-speaking American and get an American value orientation in school. It was felt that such a group of subjects might give some clue to the problem of the role of language separated from culture. We therefore obtained an additional sample of subjects, who were Americans of Japanese ancestry in Hawaii. After screening all those who had any formal instruction in the Japanese language or had learned to speak Japanese at home, we were left with 20 female monolinguals. They were all undergraduate education majors.

This sample of 20 Japanese-American females from Hawaii was compared with female monolingual subjects from the mainland U. S. and Japan. After two-way analysis of variance (country and cartoon: 3 x 4), individual means were compared for Question 3 through 9. The results are shown in Table 15.

Insert Table 15 about here

It was expected that the Japanese-American sample from Hawaii would fall in between the Japanese and American samples. This was the case in four questions: Question 3 (A's feeling towards B), 4 (A's willingness to get into the situation), 7 (responsibility), and 8 (causality). Only on Question 4 was the Japanese-American sample significantly different from the Japanese. The Japanese-Americans from Hawaii had the highest (most negative) score of the three groups on Question 5 on whether it was A's choice to act the way he did, while on Question 6 and 8, they had the lowest scores, which meant that the Japanese-Americans found it the least difficult to say "No," and perceived B as most nearly equal in status to A. Thus the directional differences were not consistent. On the most important question with regard to our hypothesis, namely on responsibility, the Japanese-American sample came out significantly different ($F = 5.16$, $p < .05$) from the mainland U. S. sample in the direction towards Japan. However, it was not close to Japan either. The difference between the Japanese and Japanese-American samples had an F of 3.52 with $p < .10$. In other words, the Japanese-Americans from Hawaii tended to attribute more responsibility to B than the mainland Americans did, but not as much

Table 15. Japan - Mainland U. S. - Hawaii Comparison of Female Monolinguals: Means and Analysis of Variance

Question		A. of V. Signif. F[1]		Mean			Signif. F in Indiv. Comp.
				Japan N=72	Mainland U. S. N=56	Jap.Am. Hawaii N=20	
3.[2]	Feeling	B	9.91***	2.21	2.32	2.29	--
4.	Willing	A	10.08***	4.42	3.46	3.70	J > US**
		B	17.01***				J > Hawaii**
		AB	6.29***				
5.	Choose?	B	43.80***	3.85	3.65	4.16	--
6.	"No"	A	3.66*	2.23	1.98	1.81	J > US*
		B	15.65***				J > Hawaii*
7.	Respons.	A	10.46***				
		B	3.47*	3.35	2.39	2.93	J > US***
							Hawaii > US*
							(J > Hawaii p < .10)
8.	Causal.	None		3.33	2.83	3.04	J > US*
9.	Status	A	4.15*				
		B	7.19***	2.29	2.10	2.05	J > US**
							J > Hawaii*

* p < .05
** p < .01
*** p < .001

1. A Country (df = 2 and 144)
B Cartoon (df = 3 and 432)

2. Question 3 was scored in the opposite direction, hence the lower the score, the more negative the feeling.

as the Japanese. As for Question 2, the Japanese-American sample showed similar fluctuations as in the above questions, depending on the cartoon. In cartoons Bus and Dining, the Japanese-Americans blamed self more than Japanese or Americans did, in Cooking they blamed others more than Japanese and Americans, and in Introduction they fell in between Japanese and Americans. None of the differences were significant.

Results for the sentences are shown in Table 34 in the Appendix. No test of significance was done for this part of the study. The monolingual English-speaking sample of Japanese-Americans in Hawaii resembled the Americans more than the Japanese in their choice of sentences. The correlations of their responses to Question 7 on responsibility and to Question 8 on causality and the sentences are given in Table 13b in the preceding chapter together with those of the Americans and Japanese. Their correlation of responsibility score to the choice of pure passive is even higher than that of monolingual female Americans from the mainland, even though the correlation of .39 was not significant due to the small size of the Japanese-American sample. That personality should be related to the choice of pure passive sentences in English is puzzling. Some have said that the passive in English tends to be used more frequently in describing negative events.[11] Niyekawa (1962) has found some consistent difference in the active-passive verb ratio between schizophrenic and normal speech in a small pilot study. It appears that the psychological implication of the passive in English needs further investigation.

In conclusion, the sample of monolingual English speaking Japanese-Americans in Hawaii did not help much in clarifying the issue of separating language from culture. While in general, the Japanese-American sample fell in between the Japanese and mainland American samples, it is possible that the American value system is as much a determining factor as the lack of support from language in accounting for the differences between the Japanese-Americans and the Japanese.

Germans. One more attempt to clarify the role of language was made. We sought a culture which has a social structure similar to that of Japan, but has no comparable grammatical support from the language. Germany as a former authoritarian country, having undergone some changes after the war, appeared to be appropriate for comparison with Japan. Obeying the orders of one's superior relieved one of responsibility in prewar Germany. While the postwar changes may be different to some extent in quality as well as in quantity from those in Japan, the two countries seemed to have many qualities in common. Another factor accounting for the choice of Germany was the writer's familiarity with the language. Very often cross-cultural differences result from the lack of equivalence in the translated tests. We wanted to avoid complete reliance on the translator and blind trust in him. The writer has seen too many translated test items that indicated that the translator was so concerned about being "exact" in translation that the function of the test item in the whole test was ignored. Sometimes an exact or loyal translation does not have the psychological equivalence to the original item (Niyekawa, 1959). We wanted to avoid making the mistake of interpreting the responses of people from another culture on the basis of the English original when the translation has other kinds of connotations not known to the researcher. We thus obtained a sample of German subjects in Berlin. The test was administered by a German colleague to a group of university students in education. The results for Questions 3 through 9 are shown in Table 16.

---

[11] Personal discussions with Charles E. Osgood and Marvin Minsky.

Insert Table 16 about here

In the two-way analysis of variance (country and cartoon: 3 x 4), country as a main effect was significant for Question 4 (A's willingness to get into the situation), 6 (difficulty in saying "no"), 8 (causality) and 9 (status). Like the sample of Japanese-Americans from Hawaii, the Germans did not show a consistent pattern of difference from the Japanese or Americans. On Questions 4, 6, and 8, they had the highest score, while on Questions2 and 5, they had the least negative scores among the three countries. They fell in between the Americans and Japanese on Question 9. On the crucial question regarding responsibility, the Germans had a score about equal to that of the Americans. Cartoon was found to be a major source of variance in this analysis as in all the others so far.

Responses to Question 2 on causal factors were particularly interesting in view of the directional difference on the issue of responsibility and causality. As Table 35 in the Appendix indicates, the Germans blamed themselves the most, the Japanese did so the least. The choice of categories, when dichotomized into blaming "others" vs. "oneself," tended to be fairly consistent over the cartoons for Germany and the U. S. For some reason, Japan responded quite differently to the cartoon Bus. (This trend was also seen in their responses to Questions 4 and 5. See Table 8 in the previous chapter.) The percentage of Japanese who chose "others" in cartoon Bus was only 24.10, while in the three other cartoons, the percentage was consistently about 50. The Americans' choice for "others" ranged from 31.85 percent (Dining) to 45.79 percent (Introduction), while the Germans maintained a fairly low percentage of 23.33 (Introduction and Bus) to 30.00 percent (Cooking). The mean percentage for all the cartoons for the three groups are given below in Table 17.

Insert Table 17 about here

Table 16. Japan - U. S. - Germany Comparison: Means and Analysis of Variance

Question		A. of V. Signif. F[1]		Mean		Signif. F Indiv. Comp.
			Japan N=250	U. S. N=136	Germany N=90	
3.[2] Feeling	B	33.56***	2.29	2.37	2.39	--
	AB	3.50**				
4. Willing	A	21.75***	4.20	3.50	4.34	J > US***
	B	107.87***				Ger > US***
	AB	8.84***				
5. Choose?	B	177.07***				
	AB	11.55***	3.66	3.59	3.32	J > Ger**
6. "No"	A	5.79**	2.19	2.06	2.36	Ger > US*
	B	46.58***				
	AB	3.19**				
7. Respons.	A	26.64***	3.19	2.47	2.46	J > US***
	B	30.05***				J > Ger***
	AB	6.19***				
8. Causal.	A	18.43***	3.24	2.90	3.74	J > US**
	AB	2.11*				Ger > US***
						Ger > J***
9. Status	A	8.86***				
	B	14.25***	2.28	2.10	2.13	J > US***
						J > Ger**

*	$p < .05$
**	$p < .01$
***	$p < .001$

[1] A Country (df = 2 and 473)
B Cartoon (df = 3 and 1419)

[2] Question 3 was scored in the opposite direction, hence the lower the score, the more negative the feeling.

Table 17. Japan - U. S. - Germany Comparison:
Mean Percentage of Attributed Causal Factors

Country	Blames Others (a, b, c)	Blames Self (d, e)
Japan	44.33	55.67
U. S.	33.30	63.70
Germany	26.39	73.61

Even though the Germans were found to attribute causality to B (alter) more than Americans and Japanese in Question 8, with regard to Question 2, they showed an opposite trend where they blamed themselves more than did Americans and Japanese. The difference was significant at the .001 level between the Japanese and Germans ($\chi^2 = 21.30$), and at the .01 level between the Americans and Germans ($\chi^2 = 10.67$).

If we try to form a consolidated picture of the Germans as compared with the Americans, that is, a picture in relative terms since their responses were by no means extreme, we might say that even though the Germans find it harder to say "No" to B ($p < .05$), are less willing to get into the situation ($p < .001$), consider B as being more the cause than Americans do ($p < .001$), they blame themselves more ($p < .01$) and do not attribute any more responsibility to B than Americans do, nor do they think that they were forced into the situation any more than Americans do. When we compare them with the Japanese, the Germans perceive B to be of significantly lower status than the Japanese do ($p < .01$), consider A's getting into the situation as more of a choice ($p < .01$), and even though they consider B to be more of a cause than the Japanese do ($p < .001$), they blame themselves more than the Japanese do for the outcome ($p < .001$) and attribute significantly less responsibility to B than the Japanese do ($p < .001$).

In summary, as hypothsized on the basis of lack of grammatical support from the language, the Germans were found to attribute less responsibility to alter despite the fact that they perceived alter to be more the cause of the outcome than the Japanese did. The Germans also blamed "self" rather than "others" as the cause for the outcome to a greater extent than Japanese did. All three of these differences between the Germans and the Japanese were significant at the .001 level.[12] While some may argue that the findings do not necessarily support the Whorfian hypothesis, we might still ask the question, "Would the Germans have possibly blamed alter more, and held him more responsible if they were speaking a language like Japanese with grammatical features that enable them to blame alter easily in a subtle way?"

Japan - Hawaii comparison in pretesting. In order to insure that there will be no gross misinterpretation of the cartoons due to cultural differences, and to test the wording of the questionnaire, a pretest was carried out in the summer of 1966, about seven months before the final testing reported in the previous chapter. The variables considered in the pretesting that were not used in the final study were outcome and status relationship. As was mentioned earlier, some of the cartoons used in the pretesting had two outcomes: positive and negative. There were ten cartoons in all, with seven of them having both positive and negative outcomes, while the remaining three (Bus, Cooking, and Dining) had only a negative outcome. Four different status relationships were assigned to cartoon figures A and B: A is lower than B, A is higher than B, and A and B are equal, and status unspecified. The subjects were 135 students from four different rural and urban universities in Japan, and 46 American students enrolled in education courses during the summer session at the University of Hawaii. The majority of students (60 to 70 percent) in the University of Hawaii sample were Americans of Japanese ancestry, mostly monolingual English-speaking, but some had familiarity with the Japanese language. The remaining students were local white Americans, mainland students in Hawaii just for the summer session, and Americans of Chinese, Korean and Filipino or mixed ancestry. In other words, the University of Hawaii sample in the pretesting was a rather mixed, heterogeneous group in terms of ethnic background, and should not be confused with the homogeneous group of Japanese-Americans used in the mainland U. S. - Japan - Hawaii comparison previously.

---

[12] The value of F was 12.93 on "causality," and 39.66 on "responsibility" when an F of 10.83 is significant at the .001 level.

We know from the findings of the main part of the study that the major sources of variance, besides country, are cartoon and sex, and that there is a strong interaction between country and cartoon in the responses of subjects from Japan and the U. S. to these visual stimuli. We also know that presentation order has some effect. These factors were not controlled for, since other factors, namely country, status and outcome, took precedence in the analysis of pretest data. The findings presented in Tables 18 and 19 should be viewed with these points in mind.

Insert Table 18 about here

Table 18 shows the results for four sets of cartoons with both positive and negative outcomes.[13] One of the four was Introduction, the other three had themes similar to Introduction. Question 3 (A's feeling toward B) and Question 8 (causality) were exactly the same as in the main study. Question 4 (A's willingness to follow B's suggestion) was on a four point scale rather than the seven point scale used in the final experiment, and Question 7 had the word "control" in place of "responsibility." The results support the findings of the main study except that the Japan-Hawaii difference on causality was not significant. Due to uncontrolled factors mentioned before, the differences may have been attenuated or inflated.

The most interesting finding, however, is that the tendency for Japanese to be less willing to get into the situation, to feel less positive towards B after the event, and to perceive B as having had greater control over the outcome as compared with Americans from Hawaii holds not only for negative outcome but also for positive outcome as well. This

---

[13] The other three sets were not included because they had too varied interpretations of the cartoon stories.

Table 18. Japan - Hawaii Comparison on Positive and Negative Outcomes: Means and Results of Analysis of Variance

Question #	Three-Way A. of V. Signif. F[1]		Two-Way Analysis of Variance[2] Outcome	Mean		Value of F for Country
				Japan	Hawaii	
3.[3]	A	19.17***	Pos.	4.11	4.43	10.12**
	B	5.06**	Neg.	1.94	2.24	8.13**
	C	914.85***				
4.	A	74.37***	Pos.	2.72	2.01	33.66***
	B	9.11***	Neg.	2.86	2.07	40.84***
7.	A	17.57***	Pos.	4.33	3.54	11.98***
	B x C	2.75*	Neg.	4.13	3.56	6.12*
8.	B	3.51*	Pos.	4.27	3.92	2.70
	C	4.08	Neg.	3.80	3.77	0.02

* $p < .05$
** $p < .01$
*** $p < .001$

[1] A Country (df = 1 and 498)
B Status (df = 3 and 498)
C Outcome (df = 1 and 498)

[2] A two-way analysis of variance was carried out separately for positive and negative outcomes with country and status as the two factors. The value of F given is for country as a main effect.

[3] Question 3 was scored in the opposite direction, hence the lower the score, the more negative the feeling.

finding initially puzzled us, but the observations made regarding the open-ended question seem to partially explain this. It appears that the tendency for Japanese to blame others in an interpersonal conflict situation is only a part of a larger pattern of behavior in which the Japanese perceives himself as a rather helpless being in relation to people of higher status or to nature.[14] The Japanese proverb "Nagai mono niwa makarero" expresses this attitude very well. Literally it means "Let yourself be swaddled by anything long." "Anything long" stands for anything of power; it can be a person of power, an organization, or even a long tradition. The essence of the proverb is "No use fighting against anything powerful." It should be noted that the proverb is an imperative sentence in the adversative passive. It expresses an attitude of resignation and of fatalistic acceptance of events and circumstances that cannot be avoided. Such an attitude is reflected in acquiescent behavior, which characterizes authoritarianism in Japan (Niyekawa, 1966). The influence of the higher status person is accepted sometimes willingly, sometimes reluctantly,[15] whether such an acceptance may lead to a positive or negative outcome. When the outcome is positive, alter is acknowledged; when the outcome is negative, he is blamed. It is interesting to note that the grammatical constructions discussed in the previous section find support lexically also. The phrase okage de or okagesama de, meaning "thanks to" or "thanks to the assistance (or kindness, etc.) of" is often used to acknowledge others' help. This is especially the case when one states anything positive about oneself or one's family member (ego or ego related things), such as one's son's success. It thus appears that this study on the Whorfian hypothesis dealt with only one aspect of a larger pattern of behavior among the Japanese.

---

[14] This again has linguistic support. First, nouns related to nature, such as sun, moon, wind, earthquake, weather, seasons, plants, etc., are treated as pseudoanimate in Japanese, and can be the subject of the constituent sentence (in deep structure) of an adversative passive sentence, while inanimate nouns cannot. Thus one can say, "Huyu ni hayaku korareta" (I was subjected to or adversely affected by the winter coming so soon), but not "Tegami ni hayaku korareta" (I was subjected to or adversely affected by the letter coming so soon) even if the letter is one that contains the expected bad news. Secondly, the causative in normal colloquial usage requires that the subject of the matrix sentence (subject of the causative verb) be of higher status than the object (subject of the constituent sentence in deep structure). Thus the sentence "Watasitati (gakusei) wa sensei ni siken o enki saseta" (We (the students) had the teacher postpone the examination) would be unacceptable except in unusual circumstances where the students forced the teacher to postpone the examination by force, such as by a strike or riot. To make clear that no force was used, one would have to say "Watasitati wa sensei ni siken o enki site moratta" in the -te morau construction. On the other hand, the principal making the teachers postpone the examination, expressed in the causative, in no way implies the use of force.

[15] As a part of a larger study by Charles E. Osgood and Kenneth Forster (in progress), Japanese students rated certain verb-adverb combinations as fitting (+), acceptable (0), or anomalous (-). While "cooperate angrily" was rated "anomalous" by 31 of the 40 subjects, "cooperate unwillingly" was rated as "fitting" by 36. None of the 40 subjects rated it as "anomalous."

Responses to cartoons that had only negative outcomes, namely Bus, Cooking, and Dining, were analyzed separately. Results of two-way analysis of variance, with country and status as the two factors, are given on the left side of Table 19. Country as a main effect was significant at above the .01 level for all the questions that were later adopted in the final study. Status was a significant source of variance in Question 3 on A's feeling towards B. For both the Americans from Hawaii and the Japanese, A's feeling towards B was most positive when the status relationship was "A is lower than B." This was a general trend found in most of the questions for both groups. That is B is accorded the least amount of causality and control for the final outcome, is resented the least, and A is perceived as having been most willing to get into the situation when A is of lower status than B. (See Table 20.) The subject's responses seem to suggest that when alter is of higher status, he is perceived as being entitled to influence ego, and consequently is less disliked or resented. This, however, may be an artifact of the experiment. Each subject was presented with cartoons of varying status relationships. He may have found the "A is lower than B" relationship most suitable to the content of the cartoon in comparison with the other status relationships. In fact,a number of Japanese subjects asked during the experiment whether typographical errors had been made in assigning the status relationship "A is higher than B." For B, as a lower status person, to influence A and bring about a negative outcome for A may have been perceived as a rude, out of place behavior. In contrast to this, the cartoons in which B was of higher status may have appeared as natural and acceptable. The subjects' generally positive attitude towards B in this status relationship may therefore have been a reactionary response. An exception to this trend was Question 6 where a significant interaction between country and status was found. Japanese, no matter what the status relationship, found it about equally hard to say "No," while the American group from Hawaii found it most difficult to say "No" when B was of higher status than A, and the least difficult when the status relationship was unspecified. (See Table 20.) While "A is lower than B" resulted in the most positive attitude towards B, there was no consistent pattern between the most negative attitude towards B and any particular status relationship.

Insert Tables 19 and 20 about here

Table 19. Japan - Hawaii Comparison on "Negative Only" Cartoons: Means and Results of Analysis of Variance

	Two-Way A. of V.		Mean (Overall)		One-Way A. of V. for Status Unspecified		
Question #	Signif. F[1]		Japan	Hawaii	Mean Japan	Hawaii	F
3.[2]	A	19.63***	2.21	2.69	2.02	2.84	19.78***
	B	3.90**					
4.	A	8.98**	2.72	2.30	2.70	2.45	1.22
6.	A	15.88***	2.35	1.71	2.46	1.25	20.71***
	A x B	2.62*					
7.	A	13.17***	3.35	2.63	3.72	2.55	17.06***
8.	A	12.27***	3.57	2.76	3.68	2.85	4.67*

* $p < .05$
** $p < .01$
*** $p < .001$

1. A Country (df = 1 and 449)
B Status (df = 3 and 449)

2. Question 3 was scored in the opposite direction, hence the lower the score, the more negative the feeling.

Table 20. Japanese and Hawaiian Means in "Negative Only" Cartoons by Status Relationship

	Status Relationship			
Question Group	A lower than B	A higher than B	A and B equal	Status unspecified
3.[1] Feeling				
Japan	2.59	2.12	2.10	2.02
Hawaii	2.91	2.67	2.36	2.84
4. Willing				
Japan	2.45	2.91	2.80	2.70
Hawaii	2.27	2.33	2.14	2.45
6. "No"				
Japan	2.31	2.32	2.32	2.46
Hawaii	2.36	1.58	1.64	1.25
7. Control				
Japan	3.00	3.79	3.68	3.72
Hawaii	2.27	2.42	3.29	2.55
8. Causality				
Japan	3.03	3.85	3.71	3.68
Hawaii	2.64	2.75	2.79	2.85

[1] Question 3 was scored in the opposite direction, hence the lower the score, the more negative the feeling.

The right hand side of Table 19 gives the results of one-way analysis of variance for "status unspecified," which is equivalent to the condition given in our final study. The findings here support what has already been discussed in the preceding chapter. The Japanese group was significantly more negative than the group from Hawaii on Question 3 (A's feeling towards B), Question 6 (difficulty in saying "No"), Question 7 (control) and Question 8 (causality).

A comparison of these means for the two groups with the means for the same three cartoons in Table 8 indicates that both the Japanese and the Hawaii groups in the pretesting had in general higher means (lower means for Question 3, which was scored in the opposite direction) than the Japanese and American samples in the final testing. The difference between the East Coast American sample and the Hawaii sample may be explainable by the previous characterization of the Hawaii sample consisting of monolingual Americans of Japanese ancestry. Since the majority of subjects in the Hawaii sample used in the pretesting were also Americans of Japanese ancestry, we would expect a similar trend in the pretest sample also. When the two samples from Hawaii are compared (Tables 15 and 19), it becomes clear that the homogeneous sample of Americans of Japanese ancestry is more like the Japanese group in Japan than the heterogeneous sample from Hawaii is. The difference between the two Japanese samples, on the other hand, may be due to the inclusion of rural students in the pretesting. The urban students are more Westernized and therefore display less of traditional Japanese characteristics, including those of language usage. However, these differences could be due to uncontrolled factors mentioned earlier in this section.

To summarize the findings from the pretesting, the results in general show the same trend found in the main part of the study. Japanese were consistently found to feel more negative towards B (alter), to be less willing to get into the situation, and to perceive B as having had greater control over the outcome as compared with Americans from Hawaii, no matter whether the outcome was negative or positive. For the three cartoons with negative outcomes only, the Japanese were found, in addition, to perceive greater difficulty in say "No," and to attribute greater causality to B than Americans from Hawaii. In other words, the findings from the pretesting were consistent with the findings reported in the preceding chapter.

VI. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to test the Whorfian hypothesis of linguistic relativity by investigating the influence of first language on perception, thinking and second language learning. The Translation Study showed that distortion in translation was in the direction of the translator's first language. British and American translators tended to disregard the connotative meaning of the adversative passive, while Japanese translators tended to read adversative meanings into the English original. It is as if native speakers of English wear one type of colored glasses and native speakers of Japanese wear another. The glasses screen the stimuli in the objective world and tinge them with the color of the glasses. In this case the colored glasses represent the cognitive framework. Just as we would be unaware of the distortion introduced by the glasses if we had worn them all our lives, so does the effect of the cognitive framework remain unconscious.

Even though the Japanese translators tended to read into English what was not there and to translate the English original into adversative passive sentences in Japanese on the basis of their Japanese cognitive framework, their use of the adversative passive was significantly less than that of authors who wrote in Japanese from the start. Translating from English seems to counteract the operation of the cognitive framework to some extent and thus minimizes its effect. The style of Japanese in translated works is closer to English than is the style found in original works in Japanese. In other words, it appears that exposure to and contact with Indo-European languages and literature have changed the style and grammar of Japanese. This gradual increase in the influence of Indo-European syntax is observed in the change of writing style even among the authors of original Japanese works. The "pure" passive, which we claim to be a recent innovation and have referred to as "translation style" passive in the text, is found in increasingly greater frequency among younger authors and recent publications. Significant correlations were found between relative frequency of occurrence of the translation style passive and year of publication of the work, as well as year of birth of the author.

The translation style, with all the characteristics that make Japanese more similar to English, is fast becoming the literary language that pervades all types of writing except personal letters. While the child hears only colloquial Japanese in his daily life during the language acquisition period (before the age of ten, Penfield & Roberts, 1959), once he enters school and learns to read, he is exposed increasingly more to translation style Japanese. By the time he is an upper grade student in high school, more than half of what he reads and writes is in translation style. Translation style is not only the preferred style now in scientific and philosophical writing, but more and more articles, stories and advertisements for popular consumption in newspapers and magazines are showing translation style characteristics.

Nakamura (1960), who considers logical thinking to be beyond the power of Japanese because of the structure of the traditional Japanese language, finds hope in the recent changes in the language that have gradually taken place since the extensive translation of Western literature began more than a century ago. These changes may be considered to have been necessitated by Japan's need to keep abreast of the scientific and technological advancement of the rest of the world. The rate of change, however, has been accelerated due to a combination of factors, such as the amount of contact with the West, the influence of the mass media of communication, and the level of educational attainment, all of which are increasing rapidly. The result is that while there are, on the one hand, regional dialects of spoken Japanese, there are stylistic differences in written Japanese, as suggested by the corrlations mentioned above.

If we were to develop a composite index of degree of Westernization, an index based upon socio-economic status, education and rural vs. urban residence, we would probably find university students in Tokyo to be the highest on the index and older people in farming or fishing villages to be the lowest. In modern societies, through intense and extensive culture contact, there are strong forces working towards what might be called an international cosmopolitan culture. Formal education, based mainly on Western standards, is one such force. While it teaches the cultural heritage of the country, it also tends to overcome cultural biases by its emphasis on science and objectivity. It thus works as an "equalizing" force among people of different cultures. In other words, modern education tends to reduce or minimize the uniqueness of any particular culture. Among university students, we would expect those attending non-metropolitan universities to be lower on the Westernization index than those attending universities in metropolitan areas, where culture contact is most extensive. Both the American and Japanese samples in the Perception Study consisted mainly of students from large metropolitan universities. The Japanese sample may thus be assumed to be one that has received strong Western influence. It is likely that those individuals in Japan with a higher Westernization index will show less of "what is uniquely Japanese."[16] The difference between Japanese and American university students, therefore, is expected to be smaller than that, say, between Japanese and American businessmen or housewives.

The Whorfian hypothesis may be restated in experimental terminology as follows: Language being one of the several major factors affecting perception and thinking, if all nonlinguistic variables are held constant, differences in perception and thinking found between speakers of different languages would be attributable to differences in language. While it is not possible to hold all nonlinguistic variables constant in large scale human experimentation, the samples used in this study are minimally different in all the other variables within practicable limits. Yet the difference between the Japanese and American samples on the attribution of responsibility was significant at the .001 level.

---

[16] The relationship between degree of Westernization and degree of "Japaneseness" is not expected to be an inverse linear one, but rather a curvilinear one. See Niyekawa (1966).

To what extent can this difference be attributed to nonlinguistic cultural variables? It was suggested earlier that the nonlinguistic variables that are likely to lead to the shifting of responsibility toward alter are the hierarchical structure of interpersonal relationships and acquiescent tendency. The hierarchical structure of interpersonal relationships is expected to be related to the attribution of responsibility to alter as follows. If alter is of higher status, ego would have to go along with alter, but alter as the person, who suggests the action or gives the order, would be held responsible for the act as well as for the outcome. In our experiment, subjects determined the status relationship between A and B on the basis of the interpersonal event that had taken place. Thus we would expect some relationship between assigned responsibility and perceived status. Among the four cultural groups tested, the Japanese subjects assigned the highest status and the greatest amount of responsibility to B. However, the Japanese-Americans from Hawaii, who perceived B as most nearly equal to A (and hence assigned the lowest status to B among the four groups) were second to the Japanese in the amount of responsibility they attributed to B. The relationship between perceived status and attribution of responsibility thus does not appear to be a linear one.

The role of acquiescence in the attribution of responsibility was expected to be as follows. In a culture where being acquiescent is the norm, if another person (alter) encourages one (ego) to engage in some act, he is "imposing" since he knows ego cannot easily refuse. Alter is therefore perceived as "forcing" ego to engage in an act and is thus held responsible by ego for the outcome. Among the four groups, the Germans found it most difficult to say "No," yet they, with the Americans, attributed the least amount of responsibility to alter, while the Japanese, who ranked second in acquiescence (finding it difficult to say "No") attributed significantly greater responsibility to alter than the Germans did. Here again we do not find a linear relationship between acquiescence and attribution of responsibility to alter.

It thus appears that these nonlinguistic cultural variables taken singly or together cannot account for the observed differences in attribution of responsibility to alter. The combined effect of these two nonlinguistic variables with the linguistic variable appears to be the most reasonable explanation for the observed differences.[17]

---

[17] It should be pointed out here that most of the Japanese-American subjects from Hawaii were third generation Japanese who were brought up by English-dominant bilingual parents whose first language was Japanese.

Both the Translation Study and the Perception Study found support for the Whorfian hypothesis. The first language, even when counteracted to some extent by modern education and by learning a foreign language, significantly affects the interpretation of events by the individual.

The role played by the second language in perception appears to be rather limited in the case of our samples. The Japanese "monolinguals" were "nonbilinguals" to be sure, but they were not monolinguals in the sense that they knew only one language. They had had six years of English before entering college. The difference between the "monolinguals" and the English majors, therefore, was just a matter of their degree of familiarity with English. The American "monolinguals" similarly had met their foreign language requirement in high school, and in this sense were not strictly monolingual. They, however, differ from the "language majors" (those studying Japanese) in that they had had no exposure to Japanese. Within each national group, the "monolinguals" and the language majors did not show any consistent differences. For a second language to have any appreciable effect on perception and cognition, it would probably have to be learned early in life during the language acquisition period, and not through the medium of the first language, but directly. Americans studying Japanese showed a greater tendency to change their cognitive framework when responding in Japanese than did the Japanese when responding in English. This was attributed to their conscious knowledge of the difference between the English passive and the Japanese passive. Most likely these American students were responding to the Japanese sentences as if to an achievement test, since the experiment was carried out during one of their regularly scheduled Japanese classes with the instructor present. Whatever the cause, the instruction of Japanese in these American universities appears to be quite effective to have the students not only understand, but also apply what they had learned about Japanese grammar. Unfortunately, the same could not be said about instruction of the English passive in Japan. Since the Japanese are generally not even aware of the negative connotation contained in the traditional Japanese passive and assume it to be the same as in English, the neutral meaning of the English passive cannot be expected to be taught.

It is quite probable that the difference in learning in these two cases is not due to inadequacies on the part of the Japanese teacher or student, but rather to the formal properties of the linguistic data itself. The English-speaking student looking at the Japanese passive is confronted with a construction which may only rarely be directly translated into an English passive. He has no simple procedure for translating intransitive verbs in the passive or transitive verbs with the extra noun phrase characteristic of the Japanese passive into English passives. He is therefore obliged to develop a new syntactic and semantic rules to deal with this construction, in the process becoming acutely aware of the difference between his language and Japanese.

The Japanese-speaking student looking at the English passive, however, finds that these sentences are translatable directly into existing Japanese constructions. He is not struck by a significant syntactic difference and hence is not aware of any semantic difference. To him the English passive fits into the overall pattern of the Japanese passive, while to the English-speaker the Japanese passive has obvious syntactic properties setting it off from the construction in his own language.

These observations suggest that there may be a general principle here which is important for teachers of foreign languages. The student, as well as the teacher, is forced to become aware of the peculiarities of the foreign language when there is no equivalent syntactic construction in the first language into which a construction in the foreign language may be regularly translated. This is like the English-speaker learning or teaching the Japanese passive. On the other hand, the fact that a construction may be regularly translatable into a particular construction in the native language may lead to a false impression of the equivalence of the constructions in the two languages. This is like the Japanese-speaker learning the English passive. The former case presents no special difficulties, but the teacher and the student must be on the lookout for superficial similarities and distinguish them from real similarities between the languages in question. In other words, it is in the area where there is no overt contrast between the languages that errors of the type described above are likely to be found.

While the learning of a second language in high school or college has its limitations, it is expected to have some effect in broadening one's perspective. As we have seen in the Translation Study, reading translated foreign literature means looking at that culture through the colored glasses of the translator's cognitive framework. It is only by reading the original that we can really grasp in depth the thoughts and emotions of the writer as well as of the people in that culture. It is likely, however, that the cognitive framework based on one's first language cannot be removed completely however fluent one becomes in a second language, unless the second language is learned during the language acquisition period.

REFERENCES

1. Allport, G. W., & Pettigrew, T. F. Cultural influence on the perception of movement: The trapezoidal illusion among Zulus. Journal of Abnormal and Social Psychology, 1957, 55, 104-113.

2. Bloch, B. Studies in colloquial Japanese III: Derivation of inflected words. Journal of American Oriental Society, 1946, 66, 304-315.

3. Brown, R. & Gilman, A. The pronouns of power and solidarity. In T. A. Sebeok (Ed.), Style in language. Cambridge, Mass.: MIT Press, 1960. Pp. 253-276.

4. Brown, R. W., & Lenneberg, E. H. A study in language and cognition. Journal of Abnormal and Social Psychology, 1954, 49, 454-462.

5. Bruner, J. S. Social psychology and perception. In E. E. Maccoby, T. M. Newcomb, & E. L. Hartley (Eds.), Readings in social psychology. New York: Holt, Rinehart & Winston, 1958. Pp. 85-94.

6. Bruner, J. S., Goodnow, Jacqueline, J., & Austin, G. A. A study of thinking. New York: John Wiley, 1956.

7. Carroll, J. B. Language, thought and reality: Selected writings of Benjamin Lee Whorf. MIT Press & John Wiley, N.Y., 1956.

8. Carroll, J. B., & Casagrande, J. B. The function of language classification in behavior. In E. E. Maccoby, T. M. Newcomb, & E. L. Hartley (Eds.), Readings in social psychology. New York: Holt, Rinehart & Winston, 1958. Pp. 18-31.

9. Chomsky, N. Aspects of the theory of syntax. Cambridge, Mass.: MIT Press, 1965.

10. Conklin, H. C. Hanunoo color categories. Southwestern Journal of Anthropology, 1955, 11, 339-344.

11. Dunn, C. J., & Yanada, S. Teach yourself Japanese. London: English Universities Press, 1958.

12. Elisséeff, S., Reischauer, E. O., & Yoshihashi, T. Elementary Japanese for College Students. Part II. Cambridge, Mass.: Harvard University Press, 1959.

13. Ervin, Susan M. The connotation of gender. WORD, 1962, 18, 248-261.

14. Fishman, J. A. A systematization of the Whorfian hypothesis. Behavioral Science, 1960, 5, 323-339.

15. Frake, C. O. The diagnosis of disease among the Subanum of Mindanao. *American Anthropologist*, 1961, *63*, 113-132.

16. Getzels, J. W., & Jackson, P. W. *Creativity and intelligence*. New York: John Wiley, 1962.

17. Haugen, E. *The Norwegian language in America: A study in bilingual behavior*. Philadelphia: University of Pennsylvania Press, 1953. 2 vols.

18. Henry, O. *The four million stories*. New York: Doubleday Page, 1909.

19. Howard, I. The so-called Japanese passive. Unpublished paper, Massachusetts Institute of Technology, Department of Linguistics, 1967.

20. Howard, I. Further observations on the Japanese passive. Unpublished paper, Massachusetts Institute of Technology, Department of Linguistics, 1968.

21. Inoue, Y. Ryōjū. In *Gendai Nihon Bungaku Zenshu*. Tokyo: Chikuma Shobō, 1956. Pp. 297-320.

22. Jorden, Eleanor H. *Beginning Japanese*. Part II. New Haven: Yale University Press, 1963.

23. Keene, D. (Ed.) *Modern Japanese literature: An anthology*. New York: Grove, 1960.

24. Kerlinger, F. N. Decision making in Japan. *Social Forces*, 1951, *30*, 36-41.

25. Koen, F. Codability of complex stimuli: Three modes of representation. *Journal of Personality and Social Psychology*, 1966, *3*, 435-441.

26. Kokuritsu Kokugo Kenkyūjo. *Keigo to keigo ishiki*. (Honorifics and the knowledge of it.) Tokyo: Shūeisha, 1957. (In Japanese.)

27. Lado, R. *Linguistics across cultures*. Ann Arbor: University of Michigan Press, 1964.

28. Lantz, D. L., & Stefflre, V. Language and cognition restudied. *Journal of Abnormal and Social Psychology*, 1964, *69*, 472-481.

29. Lenneberg, E. H. Color naming, color recognition, color discrimination: A reappraisal. *Perceptual and Motor Skills*, 1961, *12*, 375-382.

30. Levine, R., Chein, I., & Murphy, G. The relation of intensity of a need to the amount of perceptual distortion. *Journal of Psychology*, 1942, *13*, 283-293.

31. Liberman, A. M., Harris, Katherine S., Hoffman, H. S., & Griffith, B. C. The discrimination of speech sounds within and across phoneme boundaries. Journal of Experimental Psychology, 1957, 54, 358-368.

32. Mandelbaum, D. G. (Ed.) Selected writings of Edward Sapir in language, culture and personality. Berkeley: University of California Press, 1958.

33. Martin, S. E. Essential Japanese. (3rd revised ed.) Rutland, Vermont & Tokyo: Charles E. Tuttle, 1962.

34. Morris, I. Modern Japanese stories: An anthology. Rutland, Vermont & Tokyo: Charles E. Tuttle, 1965.

35. Nakamura, H. The ways of thinking of Eastern peoples. Tokyo: Japanese National Commission for UNESCO, 1960.

36. Niyekawa, Agnes M. Factors associated with authoritarianism in Japan.* Unpublished doctoral dissertation, New York University, 1959.

37. Niyekawa, Agnes M. Normal and schizophrenic speech comparison on active-passive verb ratio. In Progress Report, NIMH Grant MF-14,453, 1962.

38. Niyekawa, Agnes M. Authoritarianism in an authoritarian culture: The case of Japan. International Journal of Social Psychiatry, 1966, 12, 283-288.

39. Penfield, W., & Roberts, L. Speech and brain-mechanisms. Princeton: Princeton University Press, 1959.

40. Segall, M. H., Campbell, D. T., & Herskovits, M. J. The influence of culture on visual perception. Indianapolis: Bobbs-Merrill, 1966.

41. Sekai Bungaku Taikei (An outline of world literature). Vol. 61. Tokyo: Chikuma Shobō, 1959.

42. Sekai Tampen Bungaku Zenshū (A collection of short stories of the world). Vols. 1, 2, 13, & 14. Tokyo: Shūeisha, 1962-64.

43. Slobin, D. I. Recall of full and truncated passive sentences in connected discourse. Unpublished paper, University of California, Berkeley, 1967.

44. Spark, Muriel S. Voice at play: Short stories and radio plays. London: Macmillan, 1961.

45. Stefflre, V., Vales, V. C. & Morley, Linda. Language and cognition in Yucatan: A cross-cultural replication. Journal of Personality and Social Psychology, 1966, 4, 112-115.

46. Torrance, E. P. Adventuring in creativity. Childhood Education, 1963, 40 (Oct.), 79-87.

47. Weinreich, U. Languages in contact. New York: Linguistic Circle of New York, 1954.

48. Weinreich, U. On the semantic structure of language. In J. H. Greenberg (Ed.) Universals of language. Cambridge, Mass.: MIT Press, 1963. Pp. 114-171.

49. Winer, B. J. Statistical principles in experimental design. New York: McGraw-Hill, 1962.

50. Witkin, H. A., Lewis, H. B., Hertzman, M., Machover, K., Meissner, P. B., & Wapner, S. Personality through perception. New York: Harper, 1954.

APPENDIX

Additional Tables

(Tables 21 through 35)

Table 21. Description of the Sample of Japanese Short Stories: Title, Year of Publication, Author, and Author's Birthyear

	Title	Year of Publication	Author	Year of Birth of Author
1.	Ajisai	1931	Nagai, K.	1879
2.	Asagiri	1950	Nagai, T.	1904
3.	Ani Imōto	1934	Murou, S.	1889
4.	Botchan	1906	Natsume, S.	1867
5.	Gen Oji	1897	Kunikida, D.	1871
6.	Gin no Saji	1912	Naka, K.	1885
7.	Hakuchi	1946	Sakaguchi, A.	1906
8.	Iyagarase no Nenrei	1947	Niwa, F.	1904
9.	Jigokuhen	1918	Akutagawa, R.	1892
10.	Kamen no Kokuhaku	1949	Mishima, Y.	1925
11.	Kani Kōsen	1929	Kobayashi, T.	1903
12.	Kūchu no Geitō	1920	Ogawa, M.	1882
13.	Kunshō	1935	Tokuda, S.	1870
14.	Okujō no Kyojin	1916	Kikuchi, K.	1888
15.	Ryōjū	1948	Inoue, Y.	1907
16.	Shigadera Shōninno Koi	1954	Mishima, Y.	1925
17.	Shisei	1910	Tanizaki, J.	1886
18.	Tadanaokyō Gyōjōki	1918	Kikuchi, K.	1888
19.	Takekurabe	1890	Higuchi, I.	1872
20.	Tora	1918	Kume, M.	1891
21.	Ukigumo	1889	Futabatei, S.	1864
22.	Villon no Tsuma	1947	Dazai, O.	1901

Table 22. Description of the Sample of English Short Stories: Title and Author

	Title	Author
1.	The Chrysanthemums	Steinbeck, John
2.	The Dark Glasses	Spark, Muriel Sarah
3.	Dry September	Faulkner, William
4.	A Farewell to Arms	Hemingway, Ernest
5.	Four Meetings	James, Henry
6.	The Furnished Room	Henry, O.
7.	A German Idyll	Bates, Herbert Ernest
8.	Gone with the Wind	Mitchell, Margaret
9.	It May Never Happen	Pritchett, Victor Sawdon
10.	The Journey to Panama	Trallope, Anthony
11.	The Last Kiss	Gordimer, Nadine
12.	The Loneliness of the Long-distance Runner	Sillitoe, Alan
13.	The Man of the Crowd	Poe, Edgar Allan
14.	May Day	Fitzgerald, Francis Scott
15.	The Middle Years	James, Henry
16.	The Outstation	Maugham, William Sommerset
17.	And This is the Punishment of Shahpesh, the Persian, on Khipil, the Builder	Meredith, George
18.	Summer Night	Bowen, Elizabeth
19.	Under the Lion's Paw	Garland, Hamlin
20.	Young Archimedes	Huxley, Aldous
21.	Young Goodman Brown	Hawthorne, Nathaniel

Table 23. Frequency of Occurrence of Passives by Type: Japanese Original Short Stories

				Frequency				
No.	P_1	P_2	P_3	P_4	P_5	P_6	C	Total
1.	0	17	2	0	1	6	7	33
2.	0	0	1	5	21	4	0	31
3.	0	21	2	5	18	4	0	50
4.	0	5	2	0	1	0	0	8
5.	0	5	0	1	7	4	0	17
6.	0	8	2	0	9	4	1	24
7.	0	24	2	7	35	1	3	72
8.	3	58	3	9	15	9	9	106
9.	0	35	4	8	12	2	5	66
10.	0	8	0	4	28	1	3	44
11.	0	10	1	2	19	2	5	39
12.	0	2	1	3	14	1	1	22
13.	0	18	2	2	3	1	2	28
14.	0	8	0	0	1	0	0	9
15.	1	10	14	11	55	17	6	114
16.	0	4	9	9	16	2	3	43
17.	0	6	4	1	7	3	1	22
18.	0	43	7	7	19	5	10	91
19.	1	55	7	2	3	9	1	78
20.	1	10	2	1	4	6	0	24
21.	0	5	0	0	1	1	1	8
22.	0	12	2	2	5	6	1	28
Total	6	364	67	79	294	88	59	957
Percentage	.7	38.0	7.0	8.3	30.7	9.2	6.2	100

Table 24. Frequency of Occurrence of Passives by Type: English Original Short Stories

	Frequency							
No.	P_1	P_2	P_3	P_4	P_5	P_6	C	Total
1.	0	1	0	0	5	2	0	8
2.	0	7	0	3	16	6	2	34
3.	0	7	1	1	10	1	20	24
4.	0	19	1	1	38	15	6	80
5.	0	15	0	2	5	2	3	27
6.	0	3	1	1	8	2	1	16
7.	0	0	3	36	8	47	3	50
8.	0	14	4	4	20	5	5	52
9.	0	14	3	0	19	4	3	43
10.	1	12	1	1	15	1	2	33
11.	0	8	2	2	29	5	0	46
12.	0	40	1	1	12	6	9	69
13.	1	4	1	3	8	1	1	19
14.	0	9	1	3	29	3	3	48
15.	0	5	3	9	29	7	2	55
16.	0	14	5	4	12	2	5	42
17.	0	7	3	0	5	2	5	22
18.	0	9	5	1	41	12	6	74
19.	0	9	1	1	14	5	0	30
20.	0	20	2	2	47	4	3	78
21.	1	6	2	2	15	5	1	32
Total	3	223	37	44	413	98	64	882
Percentage	.3	25.3	4.2	5.0	46.8	11.1	7.3	100

Table 25. Frequency Distribution of Passives by Degree of Translation Equivalence: Japanese to English Translation

				Frequency				
Type of Passive	Code*: 1 +	2 =	3 =	4 =	5 -	6 -+	7 0	Total
P_1	0	2	0	0	0	1	3	6
P_2	1	2	110	6	156	16	73	364
P_3	2	44	0	11	1	1	8	67
P_4	2	24	16	13	13	3	8	79
P_5	1	190	13	34	13	1	42	294
P_6	1	39	2	19	2	1	24	88
C	2	3	20	2	19	1	12	59
Total	9	304	161	85	204	24	170	957
Percentage	.9	31.8	16.7	8.9	21.3	2.5	17.8	100

*Code for degree of equivalence

1. + Addition of information in translation
2. = Equal
3. = Equal except for nonredundancy of -(r)are-
4. = Equal in gist (paraphrase)
5. - Loss of information in translation
6. -+ Different
7. 0 Passage omitted in translation

Table 26. Frequency Distribution of Passives by Degree of Translation Equivalence: English to Japanese Translation

				Frequency				
Type of Passive	Code*: 1	2	3	4	5	6	7	Total
	-	=	=	=	+	-+	0	
P_1	0	0	1	0	2	0	0	3
P_2	0	2	88	6	127	0	0	223
P_3	0	26	1	9	0	0	1	37
P_4	0	20	6	10	8	0	0	44
P_5	0	314	10	74	11	2	2	413
P_6	0	78	1	18	0	0	1	98
C	0	4	26	3	30	0	1	64
Total	0	444	133	120	178	2	5	882
Percentage	0	50.3	15.1	13.6	20.3	.2	.6	100

* Code for degree of equivalence

1. - Loss of information in translation
2. = Equal
3. = Equal except for redundancy of -(r)are-
4. = Equal in gist (paraphrase)
5. + Addition of information in translation
6. -+ Different
7. 0 Passage added in translation

Table 27. Japan - U. S. Comparison on Responsibility by Subgroup, All Cartoons Combined

Subgroup	Japan N	Japan M	Japan S.D.	U. S. N	U. S. M	U. S. S.D.	t
Total Sample	273	3.17	1.44	153	2.47	1.46	(F=33.91***)
Sex							
Male	104	2.94	1.47	74	2.47	1.48	4.21***
Female	169	3.31	1.41	79	2.47	1.45	8.66***
Lang. Familiar.							
Monolingual	150	3.17	1.45	100	2.48	1.45	7.31***
Lang. Major	123	3.17	1.43	53	2.44	1.48	6.11***
Lang. Familiar. by Sex							
Monolingual							
Male	69	3.01	1.51	37	2.61	1.51	2.59**
Female	81	3.30	1.38	63	2.40	1.41	7.63***
Lang. Major							
Male	35	2.79	1.36	37	2.32	1.42	2.84**
Female	88	3.32	1.44	16	2.73	1.56	2.97**

* $p < .05$
** $p < .01$
*** $p < .001$

Table 28. Japan - U. S. Comparison on Responsibility by Sex and Cartoon

Cartoon Sex	Japan M	 S.D.	U. S. M	 S.D.	 t
Introduction					
Male	2.96	1.62	3.05	1.65	-.37
Female	3.27	1.40	3.08	1.54	.99
Bus					
Male	2.64	1.31	2.08	1.22	2.71**
Female	3.30	1.28	2.25	1.32	5.50***
Cooking					
Male	2.81	1.48	2.12	1.35	3.07**
Female	3.01	1.49	2.15	1.40	4.37***
Dining					
Male	3.34	1.34	2.61	1.44	3.69***
Female	3.67	1.37	2.41	1.35	7.26***

* $p < .05$
** $p < .01$
*** $p < .001$

For Japan - U. S. comparison by cartoon with sex combined, see #7 in Table 29.

Table 29. Japan - U. S. Comparison by Cartoon

	Mean		
Question Cartoon	Japan N=273	U.S. N=153	t
3.[1] Feeling			
Introduction	2.35	2.19	2.05
Bus	2.52	2.62	-1.34
Cooking	2.22	2.49	-3.64***
Dining	2.19	2.18	.12
4. Willing			
Introduction	5.04	3.94	6.01***
Bus	2.65	2.80	- .87
Cooking	3.73	3.40	1.69
Dining	5.44	3.62	10.78***
5. Choose?			
Introduction	4.48	4.21	1.40
Bus	2.33	2.60	-1.46
Cooking	3.38	3.37	.06
Dining	4.59	4.02	2.81**
6. "No"			
Introduction	2.57	2.44	1.23
Bus	2.05	1.60	4.35***
Cooking	1.97	1.82	1.31
Dining	2.24	2.45	-1.97*
7. Responsibility			
Introduction	3.15	3.07	.57
Bus	3.05	2.17	6.62***
Cooking	2.93	2.14	5.40***
Dining	3.54	2.50	7.45***
8. Causality			
Introduction	3.13	3.21	- .52
Bus	3.22	2.79	2.84**
Cooking	3.15	2.81	1.96*
Dining	3.35	2.79	3.64***
9. Status			
Introduction	2.37	2.23	2.28*
Bus	2.31	2.10	3.93***
Cooking	2.27	2.01	4.75***
Dining	2.17	2.02	2.43*

* $p < .05$
** $p < .01$
*** $p < .001$

[1] Question 3 was scored in the opposite direction, hence a negative t means that the difference between Japan and the U. S. was in the expected direction.

Table 30. Sex Comparison by Nationality

Question Subgroup	Japan Mean		t	U. S. Mean		t
	Male	Female		Male	Female	
3.[1] Feeling						
Total	2.41	2.27	3.17**	2.43	2.31	1.74
Mono.	2.38	2.25	2.24*	2.37	2.34	.36
Lang. Maj.	2.46	2.28	2.54*	2.49	2.20	2.30*
4. Willing						
Total	3.84	4.45	-4.79***	3.40	3.47	- .45
Mono.	3.81	4.39	-3.55***	3.51	3.37	.69
Lang. Maj.	3.92	4.51	-2.81**	3.30	3.89	-2.05*
5. Choose?						
Total	3.53	3.80	-2.10*	3.48	3.62	- .80
Mono.	3.54	3.82	-1.70	3.72	3.58	.63
Lang. Maj.	3.51	3.78	-1.27	3.23	3.80	-1.78
6. "No"						
Total	2.06	2.30	-3.56***	2.06	2.09	- .35
Mono.	1.99	2.67	-3.17**	2.22	2.02	1.70
Lang. Maj.	2.20	2.33	-1.19	1.90	2.38	-3.01**
7. Respons.						
Total	2.94	3.31	-4.19***	2.47	2.47	- .04
Mono.	3.01	3.30	-2.39**	2.61	2.40	1.40
Lang. Maj.	2.79	3.32	-3.80***	2.32	2.73	-1.89
8. Causal.						
Total	3.07	3.30	-2.26*	2.89	2.91	- .12
Mono.	3.16	3.28	- .95	3.01	2.82	1.23
Lang. Maj.	2.89	3.31	-2.60**	2.78	3.25	-2.01*
9. Status						
Total	2.22	2.32	-2.73**	2.10	2.08	.26
Mono.	2.18	2.28	-2.48*	2.08	2.08	- .00
Lang. Maj.	2.31	2.34	- .61	2.11	2.09	.22

* $p < .05$
** $p < .01$
*** $p < .001$

[1] Question 3 was scored in the opposite direction, hence a positive _t_ for Question 3 is equivalent in directional difference to a negative _t_ in other questions.

Table 31. Chi Square Analysis of Japanese Sentences

Cartoon Item	Male f		Male χ^2	Female f		Female χ^2	Sexes Combined χ^2
	J	US		J	US		
Introduction 紹介							
1. 知人が(Aに)[1] すゝめた	33	17		17	8		
(Aは)知人にすゝめられた	36	20		64	8		
A.S.[2] = 4.00			-.03			5.88*	2.11
2. (Aは)知人にすゝめられた	46	19		60	11		
知人が(Aに)すゝめてくれた	24	18		20	5		
			2.09			.27	2.26
3. 知人が(Aに)相手を紹介した	37	21		41	9		
(Aは)知人から相手に紹介された	32	16		40	7		
A.S. = 3.24			.10			.17	.22
4. (Aは)相手を紹介してもらった	30	12		17	6		
(Aは)相手に紹介された	39	25		63	10		
			-1.23			1.93	.07
5. (Aは)相手に会った	29	19		29	9		
(Aは)相手に会わされた	39	18		52	7		
A.S. = 1.88			.73			2.34	2.06
6. (Aは)相手と交際した	42	22		40	13		
(Aは)相手と交際させられた	26	15		41	3		
A.S. = 1.80			-.05			5.47**	1.34
7. (Aは)相手にうんざりした	44	28		54	12		
(Aは)相手にうんざりさせられた	24	9		27	4		
A.S. = 2.92			1.34			.43	1.20
Bus バス							
1. Bは(Aに)声をかけた	39	23		46	11		
(Aは)Bに声をかけられた	30	13		35	5		
A.S. = 3.92			.53			.79	.83
2. (Aは)長話しをした	58	21		63	11		
(AはBに)長話しをされた	12	14		18	5		
A.S. = 2.16			-6.54*			-.60	-3.78

Table 31. Continued

Cartoon Item	Male f J	Male f US	Male χ^2	Female f J	Female f US	Female χ^2	Sexes Combined χ^2
3. (Aは)長話しをした	50	23		52	12		
(AはBに)長話しをさせられた	19	14		28	4		
A.S. = 2.52			-1.19			.60	.07
4. (Aは)バスを逃した	65	28		72	10		
(Aは)バスを逃させられた	4	9		9	5		
A.S. = 1.04			-7.68**			-5.02*	-5.92*
Cooking 料理							
1. BはAに電話をかけた	45	24		49	12		
AはBに電話をかけられた	25	13		30	4		
A.S. = 1.33			.00			.97	.27
2. (Aは)長話しをした	44	19		48	7		
(AはBに)長話しをされた	25	18		32	9		
A.S. = 2.16			-1.54			-1.44	-1.73
3. (Aは)長話しをした	39	21		39	6		
(AはBに)長話をさせられた	30	16		41	10		
A.S. = 2.52			.00			-.68	-.02
4. (Aは)料理をこがした	58	21		66	10		
(Aは)料理をこがさせられた	11	16		14	5		
A.S. = 1.54			-9.46**			-1.98	-7.10**
5. (Aは)料理をこがした	53	26		56	11		
(AはBに)料理をこがされた	16	11		24	5		
A.S. = 2.08			-.54			-.01	-.15
Dining 食事							
1. 友人が(Aを)呼んだ	18	17		13	10		
(Aは)友人に呼ばれた	49	19		68	6		
A.S. = 3.76			4.33*			15.94**	10.77**

Table 31: Continued

Cartoon Item	Male f J	Male f US	Male χ^2	Female f J	Female f US	Female χ^2	Sexes Combined χ^2
2. 友人が(Aに)酒をすゝめた	23	16		18	8		
(Aは)友人に酒をすゝめられた	46	21		63	8		
A.S. = 3.40			1.02			5.25*	3.69
3. (Aは)酒をついでもらった	16	14		8	9		
(Aは)酒をつがれた	53	22		72	7		
			2.86			19.57**	9.76**
4. (Aは)酒を飲んだ	30	17		35	11		
(Aは)酒を飲まされた	40	20		46	5		
A.S. = 2.84			.09			3.50	1.02

* $p < .05$
** $p < .01$
*** $p < .001$

1. The noun phrases in the parentheses were included only in the version of Japanese Sentences administered to Americans studying Japanese.

2. A.S. stands for awkwardness score, which has a theoretical range of 1.00 (very awkward) to 5.00 (very natural), for the passive sentence.

Table 32. Mean Scores for Questions 7 and 8 by Cartoon and Order of Presentation

		Position in the Series			
Country	Cartoon	1st	2nd	3rd	4th
Question 7					
Japan	Introduction	3.48	3.08	2.98	3.12
	Bus	3.28	2.94	2.91	3.08
	Cooking	3.52	3.27	2.56	2.38
	Dining	3.98	3.63	3.63	3.12
	Overall Mean	3.57	3.23	3.02	2.93
U. S.	Introduction	3.03	2.97	3.06	3.09
	Bus	2.39	2.42	2.20	2.03
	Cooking	2.50	2.06	2.03	1.86
	Dining	2.64	2.58	2.62	1.97
	Overall Mean	2.64	2.51	2.48	2.24
Question 8					
Japan	Introduction	3.03	2.94	3.52	3.03
	Bus	3.38	3.39	3.28	3.03
	Cooking	3.61	3.22	3.01	2.85
	Dining	3.55	3.40	3.38	3.10
	Overall Mean	3.39	3.24	3.30	3.00
U. S.	Introduction	2.89	3.00	3.38	3.63
	Bus	2.89	3.42	2.71	2.37
	Cooking	3.03	3.10	2.94	2.14
	Dining	2.89	2.61	3.03	2.40
	Overall Mean	2.93	3.03	3.02	2.64

Table 33. Pictorial - Aural - Written Presentation Comparison:
Means and Results of Analysis of Variance
(Only Japanese Females Majoring in English)

Question	A. of V. Signif. F[1]		Mean		Signif. F Indiv. Comp.
		Picture N=83	Written N=26	Aural N=21	
3.[2] Feeling	B 16.11*** AB 2.98**	2.26	2.31	2.40	--
4. Willing	B 89.29***	4.46	4.57	4.32	--
5. Choose?	B 47.26***	3.69	3.96	3.75	--
6. "No"	B 3.28*	2.32	2.60	2.36	Pic <Writ*
7. Respons.	B 9.30*** AB 4.63***	3.31	3.18	2.86	Pic >Aur**
8. Causal.	None	3.31	3.13	3.02	--
9. Status	A 3.25*	2.32	2.49	2.44	Pic <Writ** Pic <Aur*

* $p < .05$
** $p < .01$
*** $p < .001$

1. A Mode of presentation (df = 2 and 128)
   B Cartoon (df = 3 and 384)

2. Question 3 was scored in the opposite direction, hence the lower the score, the more negative the feeling.

Table 34. Sentence Choice in Percentage for Female Samples from Japan, Mainland U. S., and Hawaii

Cartoon Item	Japan N=85	Mainland U. S. N=63	Jap. Am. Hawaii N=20
Introduction			
1. B encouraged A to meet C	35.3	76.2	65.0
A was encouraged by B to meet C	64.7	23.8	35.0
3. B introduced A	32.9	61.9	80.0
A was introduced by B	67.1	38.1	20.0
5. A met C	28.6	61.9	70.0
A was forced to meet C	71.4	38.1	30.0
6. A took C out on a date	52.9	71.4	65.0
A was forced to take C out on a date	47.1	28.6	35.0
7. A found C boring	64.3	66.7	60.0
A was bored by C	35.7	33.3	40.0
Bus			
1. B approached A	68.2	66.7	45.0
A was approached by B	31.8	33.3	55.0
2. A talked too long	41.2	83.9	60.0
B talked too long	58.8	16.1	40.0
3. A talked with B	65.9	91.9	80.0
A had to talk with B	34.1	8.1	20.0
4. A missed the bus	67.1	95.2	90.0
A was made to miss the bus	32.9	4.8	10.0
Cooking			
2. A talked too long	22.4	73.0	45.0
B talked too long	77.6	27.0	55.0
3. A talked with B	42.4	73.0	75.0
A had to talk with B	57.6	27.0	25.0
4. A burned the pot	48.2	73.0	65.0
A was caused to burn the pot	51.8	27.0	35.0
Dining			
1. They invited A	40.0	74.6	65.0
A was invited by them	60.0	25.4	35.0
2. They encouraged A to drink	35.3	65.1	65.0
A was encouraged to drink by them	64.7	34.9	35.0
4. A drank	36.5	82.5	65.0
A was made to drink	63.5	17.5	35.0

Table 35. Japan - U. S. - Germany Comparison: Mean Percentage of Attributed Causal Factors by Cartoon

Country Cartoon	Causal Factors[1] (a)	(b)	(c)	(d)	(e)
Japan (N = 249)					
Introduction	10.04	22.09	19.67	18.88	29.32
Bus	.40	13.65	10.04	56.23	19.67
Cooking	22.00	8.40	20.40	27.20	22.00
Dining	2.81	28.92	18.88	44.58	4.82
All Cartoons combined	8.81	18.27	17.25	36.72	18.95
U. S. (N = 135)					
Introduction	2.24	26.87	12.67	23.13	35.07
Bus	2.22	27.41	5.93	32.59	31.85
Cooking	6.62	19.12	10.29	40.44	23.53
Dining	3.70	24.44	3.70	60.00	8.15
All cartoons combined	3.70	24.46	8.15	39.04	24.65
Germany (N = 90)					
Introduction	1.11	13.33	8.89	27.78	48.89
Bus	0	21.11	2.22	36.67	40.00
Cooking	10.00	13.33	6.67	58.89	11.11
Dining	3.33	20.00	5.56	67.78	3.33
All cartoons combined	3.61	16.94	5.84	47.78	25.83

1. Based on Question 2, the causal factors were (a) fate or luck, (b) the combination of alter and fate, (c) alter's lack of consideration, (d) ego's own weakness in not explaining or asking, and (e) ego's carelessness or lack of ability relating to the particular task or situation.

Questionnaire

A separate Cartoon Booklet is attached to this Questionnaire.

There are nine questions in this Questionnaire for each of the four cartoons in the Cartoon Booklet.

Turn to the first cartoon and answer the nine questions regarding that cartoon. When you are finished with the first cartoon, go on to the next cartoon and follow the same procedures for all the cartoons.

Answer all questions in order without leaving out any. Select one answer and circle your choice.

Work as quickly as possible and continue on with the material to the last page.

Thank you.

INTRODUCTION

1. Following the course of events in the cartoon, with an emphasis on the interaction between A and B tell us briefly what brought about the outcome in the last panel.

2. What is A thinking about in the last panel? Choose one of the following and circle the number to the right of the sentence.

   This would not have happened

if only the topic of dating didn't come up	a
if only B didn't suggest to me that I meet the girl	b
if only B were more understanding of my awkward position	c
if only I were frank enough to tell B that I was not interested in meeting her	d
if only I had more experience in dating	e

3. How do you think A feels about B after what has happened in the last panel?

Very negative toward B	1
Negative toward B	2
Neutral toward B	3
Positive toward B	4
Very positive toward B	5

4. Was A willing to follow B's suggestion?

Definitely yes	1
Probably yes	2
Perhaps yes	3
Perhaps no	5
Probably no	6
Definitely no	7

5. Did A choose to act the way he did when the date was suggested to him?

Definitely yes	1
Probably yes	2
Perhaps yes	3
Perhaps no	5
Probably no	6
Definitely no	7

6. How difficult would it have been for A to say, "No, I would rather not meet this girl"?

Not difficult at all	1
Somewhat difficult	2
Difficult	3
Very difficult	4
Impossible	5

7. Regarding responsibility for the final outcome,

Only A was responsible	1
A was much more responsible than B	2
A was somewhat more responsible than B	3
A and B were equally responsible	4
B was somewhat more responsible than A	5
B was much more responsible than A	6
Only B was responsible	7

8. If we consider "cause" to mean "that which has brought about the final outcome,"

Only A was the cause	1
A was much more the cause than B	2
A was somewhat more the cause than B	3
A and B were equally the cause	4
B was somewhat more the cause than A	5
B was much more the cause than A	6
Only B was the cause	7

9. From A's point of view:

B is of lower status than A	1
B is of equal status as A	2
B is of higher status than A	3

BUS

1. Following the course of events in the cartoon, with an emphasis on the interaction between A and B tell us briefly what brought about the outcome in the last panel.

2. What is A thinking about in the last panel? Choose one of the following and circle the number to the right of the sentence.

   This would not have happened

if only I didn't happen to be at the bus stop	a
if only B didn't talk so long	b
if only B were watching the bus	c
if only I had the courage to tell B that I had to get on the bus	d
if only I had timed the conversation time	e

3. How do you think A feels about B after what has happened in the last panel?

Very negative toward B	1
Negative toward B	2
Neutral toward B	3
Positive toward B	4
Very positive toward B	5

4. Was A willing to talk for a long period?

Definitely yes	1
Probably yes	2
Perhaps yes	3
Perhaps no	5
Probably no	6
Definitely no	7

BUS

5. Did A choose to act the way he did when he started to talk with B?

Definitely yes	1
Probably yes	2
Perhaps yes	3
Perhaps no	5
Probably no	6
Definitely no	7

6. How difficult would it have been for A to say, "Excuse me, I have to catch the bus"?

Not difficult at all	1
Somewhat difficult	2
Difficult	3
Very difficult	4
Impossible	5

7. Regarding responsibility for the final outcome,

Only A was responsible	1
A was much more responsible than B	2
A was somewhat more responsible than B	3
A and B were equally responsible	4
B was somewhat more responsible than A	5
B was much more responsible than A	6
Only B was responsible	7

8. If we consider "cause" to mean "that which has brought about the final outcome,"

Only A was the cause	1
A was much more the cause than B	2
A was somewhat more the cause than B	3
A and B were equally the cause	4
B was somewhat more the cause than A	5
B was much more the cause than A	6
Only B was the cause	7

9. From A's point of view:

B is of lower status than A	1
B is of equal status as A	2
B is of higher status than A	3

COOKING

1. Following the course of events in the cartoon, with an emphasis on the interaction between A and B tell us briefly what brought about the outcome in the last panel?

2. What is A thinking about in the last panel? Choose one of the following and circle the number to the right of the sentence.

This would not have happened

if only the telephone didn't ring at that time .... a
if only B didn't call me at that hour .... b
if only B were more considerate c
if only I had the courage to ask B to be excused .... d
if only I were more careful about my cooking .... e

3. How do you think A feels about B after what has happened in the last panel?

Very negative toward B 1
Negative toward B 2
Neutral toward B 3
Positive toward B 4
Very positive toward B 5

4. Was A willing to talk for a long period?

Definitely yes 1
Probably yes 2
Perhaps yes 3
Perhaps no 5
Probably no 6
Definitely no 7

COOKING

5. Did A choose to act the way she did when she started to talk with B?

Definitely yes	1
Probably yes	2
Perhaps yes	3
Perhaps no	5
Probably no	6
Definitely no	7

6. How difficult would it have been for A to say, "Excuse me, I'm in the midst of cooking"?

Not difficult at all	1
Somewhat difficult	2
Difficult	3
Very difficult	4
Impossible	5

7. Regarding responsibility for the final outcome,

Only A was responsible	1
A was much more responsible than B	2
A was somewhat more responsible than B	3
A and B were equally responsible	4
B was somewhat more responsible than A	5
B was much more responsible than A	6
Only B was responsible	7

8. If we consider "cause" to mean "that which has brought about the final outcome,"

Only A was the cause	1
A was much more the cause than B	2
A was somewhat more the cause than B	3
A and B were equally the cause	4
B was somewhat more the cause than A	5
B was much more the cause than A	6
Only B was the cause	7

9. From A's point of view:

B is of lower status than A	1
B is of equal status as A	2
B is of higher status than A	3

DINING

1. Following the course of events in the cartoon, with an emphasis on the interaction between A, B and C tell us briefly what brought about the outcome in the last panel.

2. What is A thinking about in the last panel? Choose one of the following and circle the number to the right of the sentence.

This would not have happened

if only we didn't have a get-together .... a
if only B and C didn't start drinking after dinner .... b
if only B and C had better sense c
if only I had the courage to explain that I couldn't hold liquor .... d
if only I were more careful in driving .... e

3. How do you think A feels about B after what has happened in the last panel?

Very negative toward B 1
Negative toward B 2
Neutral toward B 3
Positive toward B 4
Very positive toward B 5

4. Was A willing to drink?

Definitely yes 1
Probably yes 2
Perhaps yes 3
Perhaps no 5
Probably no 6
Definitely no... 7

DINING

5. Did A choose to act the way he did when he started to drink?

Definitely yes	1
Probably yes	2
Perhaps yes	3
Perhaps no	5
Probably no	6
Definitely no	7

6. How difficult would it have been for A to say, "No, I would rather not drink"?

Not difficult at all	1
Somewhat difficult	2
Difficult	3
Very difficult	4
Impossible	5

7. Regarding responsibility for the final outcome,

Only A was responsible	1
A was much more responsible than B	2
A was somewhat more responsible than B	3
A and B were equally responsible	4
B was somewhat more responsible than A	5
B was much more responsible than A	6
Only B was responsible	7

8. If we consider "cause" to mean "that which has brought about the final outcome,"

Only A was the cause	1
A was much more the cause than B	2
A was somewhat more the cause than B	3
A and B were equally the cause	4
B was somewhat more the cause than A	5
B was much more the cause than A	6
Only B was the cause	7

9. From A's point of view:

B is of lower status than A	1
B is of equal status as A	2
B is of higher status than A	3

Cartoon Booklet

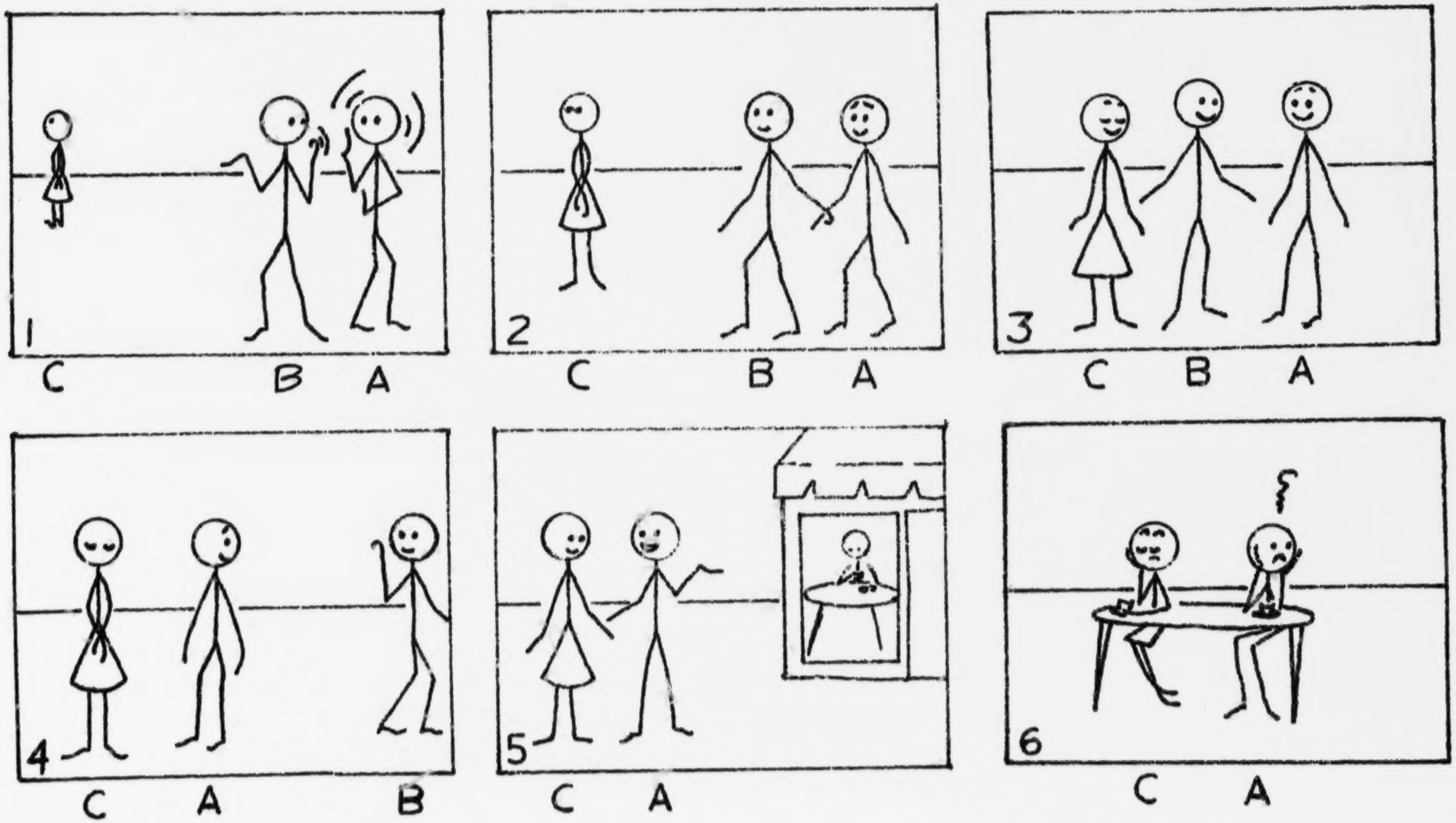
This is your Cartoon Booklet

DO NOT OPEN UNTIL INSTRUCTED TO DO SO

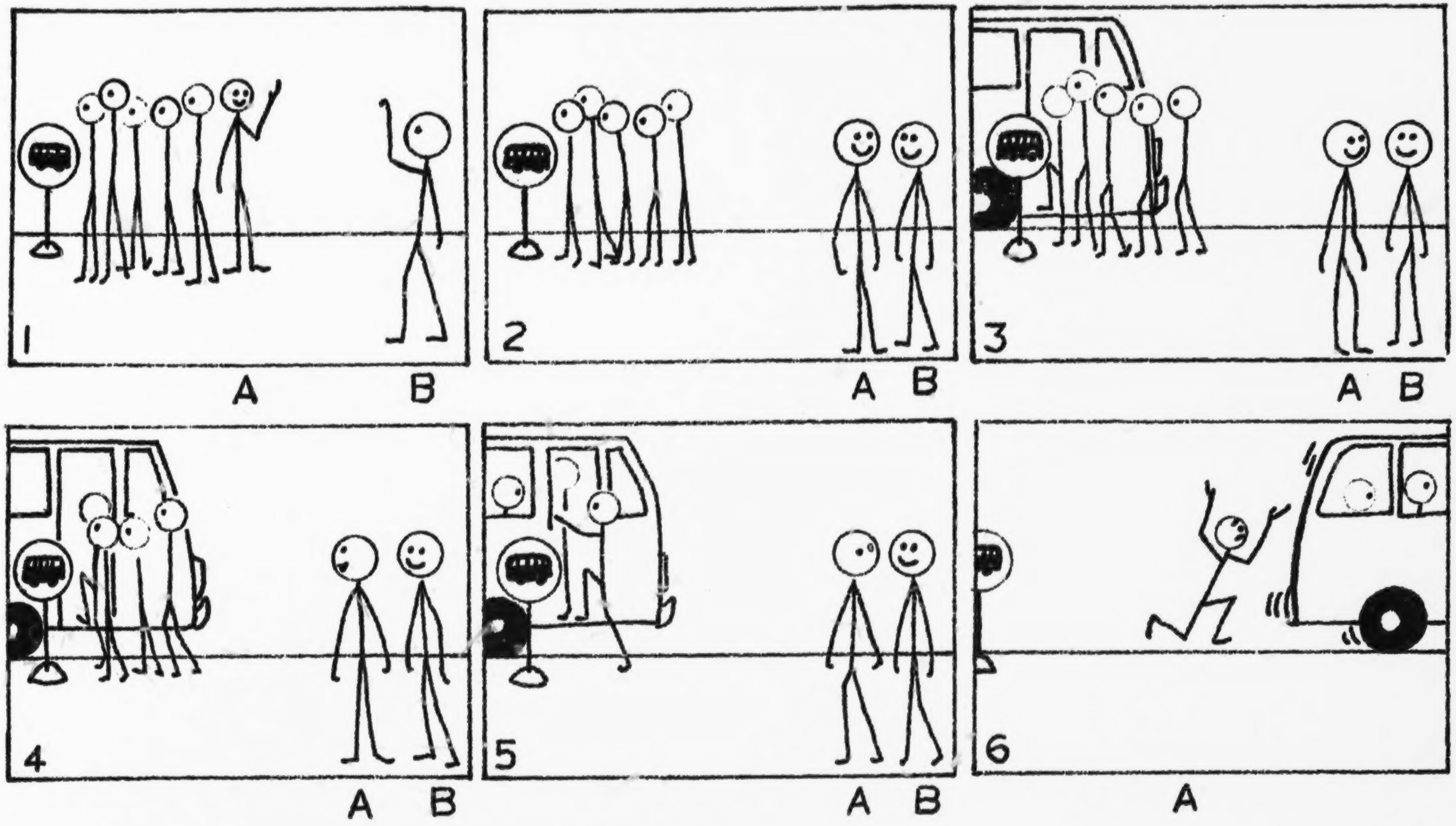
When you are instructed to open the booklet, turn only to the next page.

Please do not look through the Booklet.

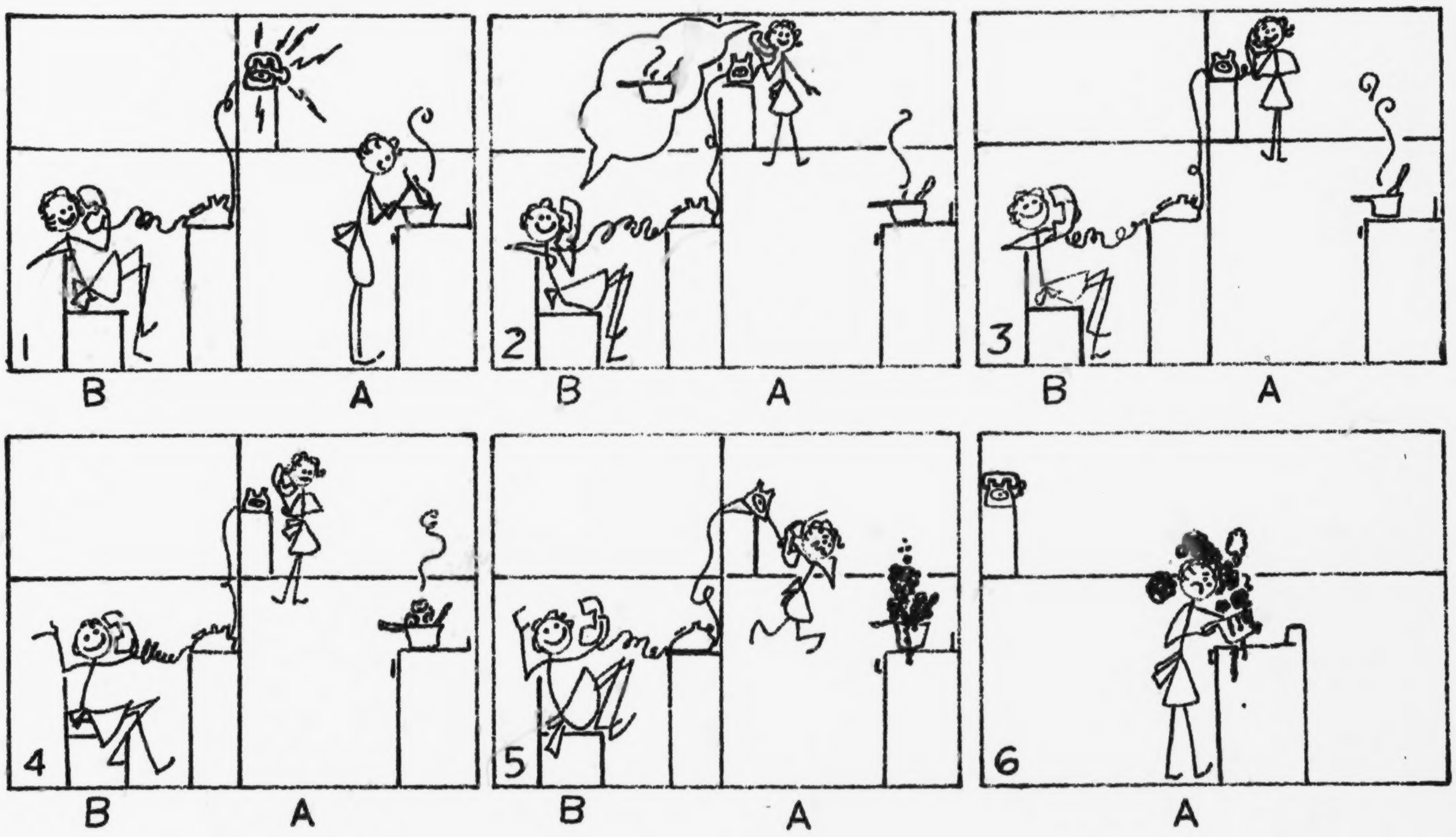
INTRODUCTION


1
C
B
A
2
C
B
A
3
C
B
A
4
C
A
B
5
C
A
6
C
A

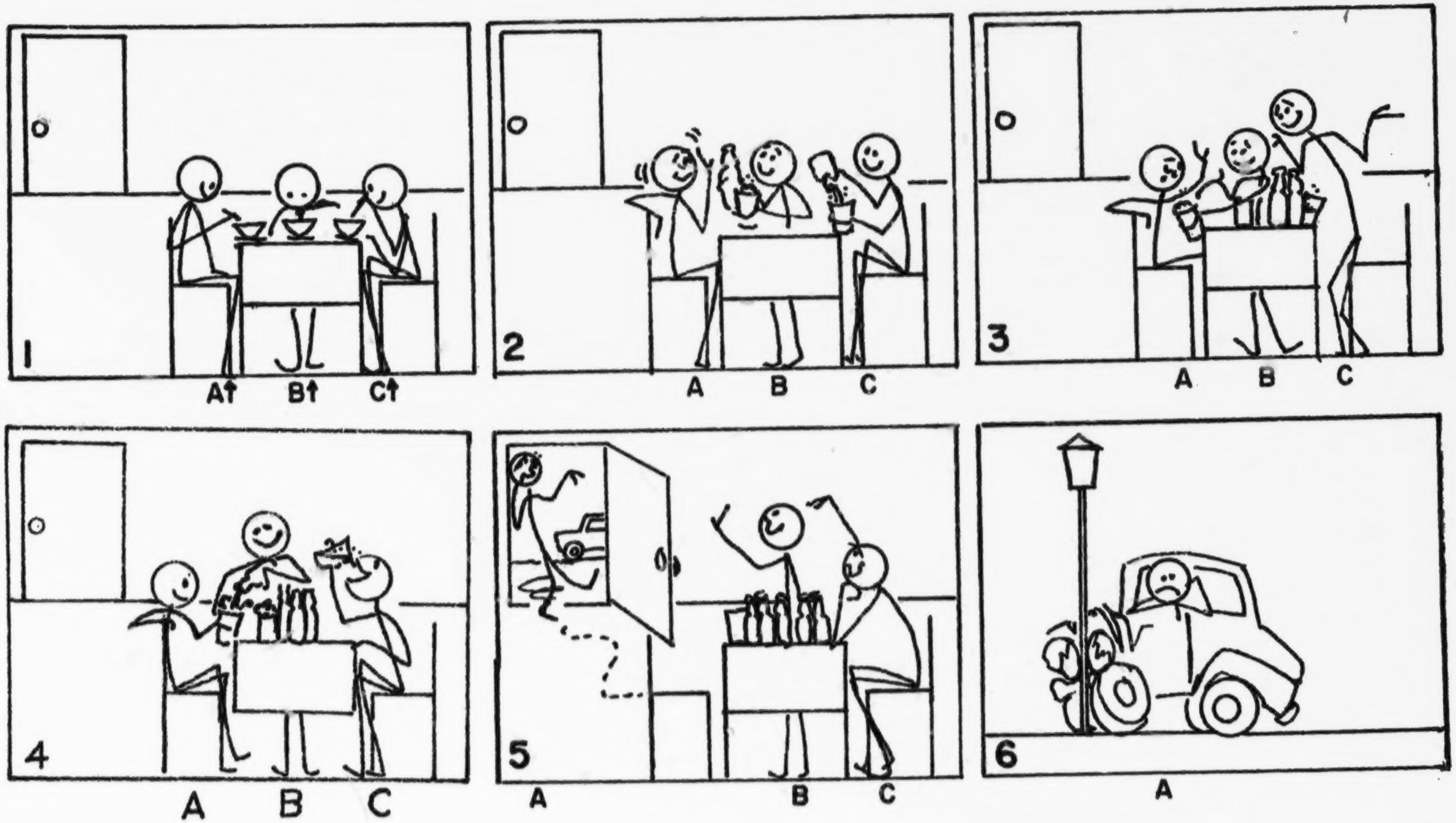
BUS


1
A
B
2
A
B
3
A
B
4
A
B
5
A
B
6
A

COOKING


1
B
A
2
B
A
3
B
A
4
B
A
5
B
A
6
A

DINING


1
A↑
B↑
C↑
2
A
B
C
3
A
B
C
4
A
B
C
5
A
B
C
6
A

Sentences

(English)

INSTRUCTIONS

Each of the four pages of sentences to follow are related to the four cartoons which you have just seen.

From each pair of sentences (a and b) select the one that most appropriately describes the cartoon situation in question. That is to say, circle 1 or 2.

Do not skip any and work as quickly as you can.

(Disregard any gaps in numbering.)

Introduction

1. a. B encouraged A to meet C 1
   b. A was encouraged by B to meet C 2

3. a. B introduced A 1
   b. A was introduced by B 2

5. a. A met C 1
   b. A was forced to meet C 2

6. a. A took C out on a date 1
   b. A was forced to take C out on a date 2

7. a. A found C boring 1
   b. A was bored by C 2

Bus

1. a. B approached A 1
   b. A was approached by B 2

2. a. A talked too long 1
   b. B talked too long 2

3. a. A talked with B 1
   b. A had to talk with B 2

4. a. A missed the bus 1
   b. A was made to miss the bus 2

Cooking

1. a. B called up A 1
   b. A received a call from B 2

2. a. A talked too long 1
   b. B talked too long 2

3. a. A talked with B 1
   b. A had to talk with B 2

4. a. A burned the pot 1
   b. A was caused to burn the pot 2

5. a. A burned the pot 1
   b. B caused the pot to burn 2

Dining

1. a. They invited A 1
   b. A was invited by them 2

2. a. They encouraged A to drink 1
   b. A was encouraged to drink by them 2

4. a. A drank 1
   b. A was made to drink 2

5. a. A had an accident 1
   b. A caused an accident 2

Sentences

(Japanese)

紹介

1. 知人が勧めた。………………………… a.
   知人に勧められた。……………………… b.

2. 知人に勧められた。……………………… a.
   知人が勧めて呉れた。…………………… b.

3. 知人が相手を紹介した。………………… a.
   知人から相手に紹介された。…………… b.

4. 相手を紹介して貰った。………………… a.
   相手に紹介された。……………………… b.

5. 相手に会った。…………………………… a.
   相手に会わされた。……………………… b.

6. 相手と交際した。………………………… a.
   相手と交際させられた。………………… b.

7. 相手にうんざりした。…………………… a.
   相手にうんざりさせられた。…………… b.

バス

1. {Bが声をかけた。…………… a.
　 {Bに声をかけられた。…………… b.

2. {長話しをした。…………… a.
　 {長話しをされた。…………… b.

3. {長話しをした。…………… a.
　 {長話しをさせられた。…………… b.

4. {バスを逃した。…………… a.
　 {バスを逃させられた。…………… b.

料 理

1. { Bは Aに 電話を かけた。 ------------- a.
   { Aは Bに 電話を かけられた。---------- b.

2. { 長話しを した。 --------------------- a.
   { 長話しを された。------------------- b.

3. { 長話しを した。 --------------------- a.
   { 長話しを させられた。--------------- b.

4. { 料理を こがした。------------------- a.
   { 料理を こがさせられた。------------- b.

5. { 料理を こがした。------------------- a.
   { 料理を こがされた。----------------- b.

食事

1. 友人が呼んだ。 ------------------ a.
   友人に呼ばれた。 ------------------ b.

2. 友人が酒を勧めた。 ------------------ a.
   友人に酒を勧められた。 ------------------ b.

3. 酒をついで貰った。 ------------------ a.
   酒をつがれた。 ------------------ b.

4. 酒を飲んだ。 ------------------ a.
   酒を飲まされた。 ------------------ b.

5. 事故が おきた。 ------------------ a.
   事故を おこした。 ------------------ b.

Passages Used In The Cognition Study

INTRODUCTION

Two men A and B are talking. B wants A to meet a girl C. A is reluctant to meet the girl. B encourages A to meet the girl. A meets the girl; he appears pleased at the meeting. B leaves the two of them alone. A invites the girl C to go to a restaurant. They go to the restaurant. Both A and the girl C do not enjoy each other's company at the restaurant.

BUS

A is waiting for a bus at the bus stop. He is at the end of a line. There are five persons in line before him. A is greeted by B. A smiles, and waves back. A walks over to B who is a short distance away from the bus stop. A and B engage in a pleasant conversation. They are not facing the bus stop. The bus arrives and the people waiting in line start to get on. A turns his head and notices that the bus has arrived. He sees the first person in line get on. A then turns back to face B, and both continue in conversation. Neighter A, nor B are facing the bus. The bus pulls away before A gets on it. A runs after the bus, waving his hands, but he is too late.

COOKING

B telephones A. A is cooking in a pot over the stove. B learns from A that she is cooking. The two women engage in a pleasant conversation. A is able to watch the pot at a distance while she is talking on the phone. After a while A notices that her pot is beginning to burn. A and B continue talking. The pot is burning and A is greatly distressed while she is holding the telephone. By the time the telephone conversation is over, the cooking is entirely burned.

DINING

Three men, A, B, and C are eating together at a table. After eating, B and C start to drink. B offers A a drink. A refuses. B and C both encourage A to drink. A again refuses. B and C continue drinking. A agrees to drink. B fills up A's glass. After quite a bit of drinking by all, A takes leave and staggers out to his car. A drives off. An accident occurs. A's car smashes into a telephone pole. A appears to be all right. The car is greatly damaged.